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# GESTATIONAL WEIGHT GAIN AND PREGNANCY OUTCOMES


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# LIST OF ABBREVIATIONS

| Abbreviation | Full Form |
|---|---|
| APOs | Adverse Pregnancy Outcomes |
| BMI | Body Mass Index |
| CI | Confidence Interval |
| GDM | Gestational Diabetes Mellitus |
| GWG | Gestational Weight Gain |
| HDP | Hypertensive Disorders of Pregnancy |
| IOM | Institute of Medicine |
| LBW | Low Birth Weight |
| LGA | Large for Gestational Age |
| MINA | Mother and Infant Nutrition Assessment |
| MPTB | Medically Indicated Preterm Birth |
| NICU | Neonatal Intensive Care Unit |
| OR | Odds Ratio |
| PPROM | Preterm Premature Rupture of Membranes |
| PROM | Premature Rupture of Membranes |
| PTB | Preterm Birth |
| PTD | Preterm Delivery |
| SGA | Small for Gestational Age |
| SPTB | Spontaneous Preterm Birth |
| WHO | World Health Organization |

# *INTRODUCTION*

# INTRODUCTION

Gestational weight gain (GWG) represents a critical component of pregnancy that significantly influences both maternal and fetal outcomes[1]. The amount of weight gained during pregnancy has been increasingly recognized as a modifiable risk factor that can impact immediate pregnancy outcomes and long-term health consequences for both mother and child[2]. Medical professionals and researchers have devoted considerable attention to understanding the optimal weight gain patterns during pregnancy and their relationships to various health outcomes.

The understanding of optimal gestational weight gain has undergone substantial evolution over the past century. During the 1930s, healthcare providers actually restricted weight gain during pregnancy due to concerns about complications during delivery[3]. This perspective underwent a dramatic shift by the 1970s when research began demonstrating the crucial importance of adequate weight gain for proper fetal growth and development[4]. The Institute of Medicine (IOM) made a significant contribution to this field by publishing comprehensive guidelines for gestational weight gain in 1990. These guidelines received a major update in 2009, establishing recommendations that continue to guide clinical practice today[5].

## CURRENT RECOMMENDATIONS AND RATIONALE

The Institute of Medicine's current guidelines provide specific weight gain recommendations based on pre-pregnancy Body Mass Index (BMI). Research has consistently shown that adherence to these guidelines correlates with improved pregnancy outcomes[6]. For underweight women (BMI <18.5), the recommended gain ranges from 28-40 pounds, as these women often require additional nutritional reserves to support fetal growth[7]. Women with normal pre-pregnancy weight (BMI 18.5-24.9) should aim for 25-35 pounds of gain, while overweight women (BMI 25.0-29.9) are advised to gain 15-25 pounds. Recent studies have demonstrated that obese women (BMI ≥30.0) should limit their gain to 11-20 pounds to minimize complications while still ensuring adequate fetal growth[8].

Pregnancy involves complex physiological changes that contribute to weight gain beyond simple fat accumulation. Studies have detailed how the growing fetus

typically accounts for approximately 7-8 pounds of the total weight gain, while the placenta adds another 1-2 pounds[9]. Amniotic fluid contributes 2-3 pounds, and the enlarging uterus adds about 2 pounds. Research has shown that maternal physiological adaptations include expanded blood volume, which adds 3-4 pounds, increased breast tissue contributing 2-3 pounds, and additional extracellular fluid accounting for 2-3 pounds[10]. These carefully orchestrated changes support both maternal adaptation to pregnancy and fetal development.

The relationship between gestational weight gain and pregnancy outcomes has been extensively studied in both short-term and long-term contexts. Research has demonstrated that inadequate weight gain during pregnancy significantly increases the risk of adverse maternal outcomes, including preterm labor, maternal anemia, and reduced success with breastfeeding[11]. Studies have also linked insufficient weight gain to an elevated risk of postpartum depression, highlighting the psychological implications of suboptimal nutrition during pregnancy[12].

Conversely, excessive gestational weight gain presents its own set of challenges. Large-scale epidemiological studies have shown that women who gain more than the recommended amount face increased risks of gestational diabetes, pregnancy-induced hypertension, and cesarean delivery[13]. Perhaps most significantly, excessive weight gain often leads to postpartum weight retention, which can contribute to long-term obesity and associated health complications. Research indicates that up to 75% of women who gain excessive weight during pregnancy retain more than 10 pounds at one year postpartum[14].

The impact of gestational weight gain on fetal outcomes has been well-documented through numerous research studies. Inadequate maternal weight gain has been consistently associated with increased risks of small for gestational age (SGA) infants and low birth weight, both of which can have significant implications for neonatal health and development[15]. A comprehensive meta-analysis demonstrated that women who gained less than the recommended amount had a 23% higher risk of delivering an SGA infant compared to women who met the guidelines[16].

At the other end of the spectrum, excessive gestational weight gain correlates strongly with large for gestational age (LGA) infants and macrosomia. These conditions not

only complicate delivery but also carry long-term implications for the child's health. Research has shown that infants born to mothers with excessive weight gain have a significantly higher risk of childhood obesity and metabolic disorders[17].

The consequences of gestational weight gain extend well beyond the immediate postpartum period. Longitudinal studies have revealed that maternal weight gain during pregnancy can influence offspring health throughout childhood and into adulthood[18]. Children born to mothers with excessive gestational weight gain show higher rates of obesity, altered metabolic programming, and increased cardiovascular risk factors. Additionally, research has demonstrated associations between maternal weight gain and neurodevelopmental outcomes, including cognitive function and behavioral patterns[19].

Multiple pregnancies require distinct approaches to weight gain management. Twin pregnancies typically demand higher weight gains, with research suggesting optimal ranges of 37-54 pounds for women with normal pre-pregnancy BMI[20]. The requirements increase further for triplet pregnancies, though exact recommendations vary based on individual circumstances and pre-pregnancy weight status.

Adolescent pregnancies present unique challenges in weight gain management. Young mothers must balance their own growth needs with those of the developing fetus, often requiring higher total weight gains than adult women[21]. Studies have shown that adolescent mothers who achieve adequate weight gain have better pregnancy outcomes and reduced risks of complications.

Effective monitoring of gestational weight gain requires a systematic and evidence-based approach. Healthcare providers typically begin by accurately determining pre-pregnancy BMI, which serves as the foundation for establishing appropriate weight gain targets[22]. Regular monitoring throughout pregnancy involves standardized weighing procedures and careful documentation of weight changes on gestational age-specific charts. Research has demonstrated that consistent monitoring, combined with regular feedback to patients, significantly improves adherence to weight gain recommendations[23].

Gestational diabetes mellitus (GDM) presents unique challenges in weight gain

management during pregnancy. Women diagnosed with GDM require particularly careful monitoring of their weight gain patterns, as excessive gain can exacerbate glucose intolerance and increase the risk of adverse outcomes[24-28]. Research has shown that appropriate weight gain management in GDM patients can help minimize the risk of macrosomia and other complications associated with poor glycemic control[29].

Hypertensive disorders of pregnancy, including preeclampsia, also significantly impact weight gain patterns. These conditions often involve fluid retention and edema, which can mask true nutritional status and complicate weight gain assessment[30]. Healthcare providers must carefully differentiate between pathological fluid retention and normal pregnancy-related weight gain to provide appropriate management strategies.

This study was design to determine association between gestational weight gain and adverse neonatal and maternal outcomes.

## NEED FOR THE STUDY

- Very few studies have addressed the association between Gestational weight gain and pregnancy outcomes in India ( especially northern India despite a higher prevalence of inadequate Gestational weight gain and adverse pregnancy outcomes.)
- In the event of positive association, corrective measures can be undertaken to avoid adverse neonatal outcomes in inadequate gestational weight gain.

# *AIMS AND OBJECTIVES*

# AIMS & OBJECTIVES

**Aim:**

To determine association between gestational weight gain and adverse neonatal outcomes

**Objectives:**

- To estimate the prevalence of gestational weight gain during third trimester.
- To estimate the impact of adequate Gestational weight gain on pregnancy outcomes.
- Prevelances of adverse neonatal outcomes like Low birth weight, premature birth, & small for gestatinal age.

# *REVIEW OF LITERATURE*

# REVIEW OF LITERATURE

## Gestational Weight Gain Guidelines

Pre-pregnancy BMI is a widely used measure of maternal weight status before conception, calculated as the ratio of weight in kilograms to the square of height in meters (kg/m²). The WHO classifies BMI into four categories: underweight (BMI <18.5 kg/m²), normal weight (BMI 18.5-24.9 kg/m²), overweight (BMI 25.0-29.9 kg/m²), and obese (BMI ≥30.0 kg/m²) [19].

The Revised Consensus Guidelines of India categorize individuals based on their Body Mass Index (BMI) and corresponding nutritional status. According to these guidelines, a BMI below 18.5 indicates underweight status, while a BMI falling within the range of 18.5 to 22.9 is considered normal. Individuals with a BMI ranging from 23.0 to 24.9 are classified as overweight, and those with a BMI above 25 fall into the obese category

The table presents the **Institute of Medicine (IOM) weight gain recommendations for pregnancy** based on pre-pregnancy **BMI categories defined by the WHO Asia Pacific criteria**.[5]

| **Weight Category** | **WHO Asia Pacific Criteria (BMI, kg/m²)** | **IOM Recommended Weight Gain (kg)** |
|---|---|---|
| **Underweight** | <18.5 | 12–18 |
| **Normal weight** | 18.5–22.9 | 11.5–16 |
| **Overweight** | 23–24.9 | 7–11.5 |
| **Obese** | ≥25 | 5–9 |

These ranges were developed based on evidence linking GWG to maternal and child health outcomes. The guidelines aim to balance the risks of insufficient weight gain (e.g. preterm birth, low birth weight) with those of excessive gain (e.g. postpartum weight retention, childhood obesity).[5]

It's important to note that these are general recommendations and an individual's ideal GWG may differ based on factors like age, parity, smoking status, and the presence of multiple fetuses. Providers should consider a patient's unique circumstances when setting weight gain goals.

**Patterns of Gestational Weight Gain**

Weight gain during pregnancy generally follows a predictable pattern, with minimal gain in the first trimester followed by steady increases in the second and third trimesters. On average, women gain 1-4.5 lbs in the first trimester and 1-2 lbs per week thereafter.[31]

However, there is significant variation in both the amount and timing of GWG between individuals. Some women may gain weight more rapidly early on, while others have a slower rate of gain that increases later in pregnancy. Studies suggest that the pattern of gain may be more important than the total amount. Excess GWG in the first half of pregnancy appears to be particularly detrimental, as it is associated with a higher risk of gestational diabetes, preeclampsia, and excess fetal growth.[31]

Monitoring weight gain throughout pregnancy allows providers to identify concerning patterns and make adjustments to nutrition and physical activity recommendations as needed. However, frequent weigh-ins may cause unnecessary stress and preoccupation with weight.[5] Many experts recommend weighing at each prenatal visit but not counseling patients to track weight at home between appointments.[32]

**Consequences of Insufficient Gestational Weight Gain**

Inadequate GWG is associated with numerous adverse pregnancy outcomes, including:

**Preterm birth:** Women who gain less than the recommended amount of weight are at increased risk of delivering before 37 weeks gestation. This risk is highest among underweight women with low GWG.

Several studies have demonstrated an increased risk of preterm delivery among underweight women. A systematic review and meta-analysis by Han et al. [33] reported that underweight women had a significantly higher risk of preterm birth

compared to women with normal pre-pregnancy BMI (pooled adjusted odds ratio [OR] = 1.29, 95% confidence interval [CI]: 1.16-1.43).

The potential mechanisms underlying the association between underweight and preterm birth are not fully understood but may involve inadequate nutritional reserves, suboptimal fetal growth, and an increased risk of pregnancy complications, such as preeclampsia and intrauterine growth restriction . Undernutrition during pregnancy can lead to deficiencies in essential nutrients, compromising placental function and fetal development, which may trigger preterm labor or necessitate preterm delivery [33].

**Low birth weight:** Insufficient GWG is a major risk factor for having a baby that is small for gestational age (SGA) or low birth weight (LBW), defined as weighing less than 2500 g at birth.[9] LBW infants are more likely to experience complications like respiratory distress syndrome, hypoglycemia, and impaired immune function.[31]

Miscarriage and stillbirth: Some studies have found associations between low GWG and pregnancy loss, although evidence is mixed.[34]

Impaired fetal brain development: Inadequate maternal nutrition and weight gain may negatively impact fetal neurodevelopment. Animal studies suggest that nutrient restriction during pregnancy can lead to decreased brain weight, altered neurotransmitter levels, and impaired cognitive performance in offspring. The risks of insufficient GWG are greatest for underweight women and those with restricted weight gain early in pregnancy. Even normal weight women who gain at the lower end of the recommended range appear to have slightly elevated risks of preterm birth and LBW compared to those with GWG in the middle of the range.[35]

It's important for providers to identify and address potential causes of inadequate GWG, such as food insecurity, disordered eating, hyperemesis gravidarum, and substance abuse. Providing nutrition counseling and resources may help promote healthy weight gain and mitigate the risks of adverse outcomes.

**Consequences of Excessive Gestational Weight Gain**

Just as insufficient GWG can be detrimental, gaining too much weight also poses

risks for mothers and babies. Potential complications of excessive GWG include:[5,31]

- Gestational diabetes: GWG above guidelines is associated with a 2-3 fold increased risk of gestational diabetes mellitus (GDM), with the highest risk among overweight and obese women. GDM increases the likelihood of various pregnancy complications as well as the child's future risk of obesity and type 2 diabetes.

- Hypertensive disorders of pregnancy: Excess GWG is linked to a higher incidence of gestational hypertension and preeclampsia. These conditions can lead to preterm delivery, placental abruption, and maternal organ damage if untreated.

- Macrosomia: Women with high GWG are more likely to have a baby that is large for gestational age (LGA) or has macrosomia (birth weight > 4000 g). Macrosomic infants are at risk for shoulder dystocia, brachial plexus injury, hypoglycemia, and childhood obesity.

- Cesarean delivery: Excessive GWG is associated with a 1.5-3 times greater chance of cesarean section, even after accounting for fetal size. This may be partially explained by the increased risk of labor complications like chorioamnionitis in women with high GWG.

- Postpartum weight retention: A large proportion of women with excessive GWG go on to have significant postpartum weight retention. This raises the risk of entering future pregnancies with a higher BMI and its associated complications. Failure to lose pregnancy weight is also linked to long-term obesity, cardiovascular disease, and type 2 diabetes in mothers.[36]

**Obesity and Preterm Birth**

- At the other end of the BMI spectrum, obesity before pregnancy has also been linked to an increased risk of preterm delivery. A systematic review and meta-analysis by McDonald et al. [37] reported a significantly higher risk of

preterm birth among obese women compared to those with normal pre-pregnancy BMI (pooled adjusted OR = 1.24, 95% CI: 1.18-1.30).

- The mechanisms underlying the association between obesity and preterm birth are complex and multifaceted. Obesity is associated with chronic low-grade inflammation, metabolic disturbances, and hormonal imbalances, all of which can adversely affect placental function and fetal development. Obese women are also more prone to developing gestational diabetes, preeclampsia, and other pregnancy complications that may necessitate preterm delivery.
- Furthermore, obesity can lead to mechanical challenges during pregnancy, such as increased intra-abdominal pressure and cervical incompetence, which may contribute to preterm labor and preterm premature rupture of membranes (PPROM).[37]

**Potential Mechanisms**

The mechanisms underlying the association between pre-pregnancy BMI, gestational weight gain, and preterm delivery are complex and multifaceted. Several potential pathways have been proposed to explain these relationships:

1. **Inflammation and Oxidative Stress** Obesity and excessive gestational weight gain are associated with chronic low-grade inflammation and increased oxidative stress, which can contribute to the pathogenesis of preterm birth . Inflammatory cytokines and oxidative stress can trigger cervical remodeling, membrane rupture, and preterm labor.

2. **Metabolic Disturbances** Obesity and excessive gestational weight gain can lead to metabolic disturbances, such as insulin resistance, hyperglycemia, and dyslipidemia [31]. These metabolic alterations can impair placental function, compromise fetal growth, and increase the risk of pregnancy complications associated with preterm birth .

3. **Hormonal Changes** Obesity and excessive gestational weight gain can affect the production and regulation of various hormones involved in pregnancy, such as estrogen, progesterone, and leptin [31]. Hormonal imbalances can contribute to the development of pregnancy complications and potentially trigger preterm labor .

4. **Placental Insufficiency** Obesity and inadequate gestational weight gain can adversely affect placental development and function . Placental insufficiency can lead to impaired nutrient and oxygen transfer to the fetus, compromising fetal growth and increasing the risk of preterm birth.

5. **Maternal Comorbidities** Pre-pregnancy obesity and excessive gestational weight gain are associated with an increased risk of developing maternal comorbidities, such as gestational diabetes, preeclampsia, and hypertensive disorders [37]. These conditions can increase the risk of preterm delivery due to maternal or fetal indications [38].

Research suggests that the timing of excessive GWG matters. High weight gain velocity in the first half of pregnancy seems to be especially predictive of adverse outcomes.[5] Helping women avoid excess early GWG through diet and lifestyle counseling may reduce risks. Importantly, these interventions should be delivered in a supportive, nonjudgmental manner to prevent stigma and stress.

**Nutrition and Lifestyle Factors Influencing Gestational Weight Gain**

While some amount of weight gain is inevitable and necessary during pregnancy, GWG is also impacted by modifiable nutrition and lifestyle factors:

- Dietary intake: Not surprisingly, women who consume a higher quantity of calories tend to have greater GWG. However, diet quality also plays a role. Adherence to a Mediterranean-style diet rich in fruits, vegetables, whole grains, nuts, fish, and olive oil is associated with lower likelihood of excessive GWG and complications like GDM and preeclampsia. Conversely, diets high in refined grains, added sugars, red meat, and saturated fat are linked to higher GWG and adverse outcomes.[29]

- Physical activity: Engaging in regular physical activity during pregnancy can help manage GWG. Pregnant women who meet physical activity guidelines of at least 150 minutes per week of moderate intensity activity gain less weight and have lower rates of GDM and preeclampsia than those who are less active. Strength training also appears beneficial for reducing excessive GWG.[32]

- Sleep: Getting adequate sleep is important for regulating weight gain. Studies have found associations between short sleep duration (< 7 hours per night) and increased GWG, particularly in overweight and obese women. Poor sleep quality and sleep disordered breathing are also linked to higher GWG.[35] The mechanisms likely involve changes in hunger hormones and insulin resistance related to sleep disturbance.

- Stress: High levels of psychosocial stress during pregnancy are associated with greater GWG and higher likelihood of exceeding guidelines, independent of dietary intake.[37] This may be due to stress-induced changes in cortisol and appetite-regulating hormones that promote caloric intake and fat storage. Stress management techniques like meditation and social support may help mitigate these effects.

- Substance use: Cigarette smoking is associated with lower GWG, while secondhand smoke exposure and smokeless tobacco use are linked to increased weight gain. Alcohol consumption and drug abuse can also negatively impact GWG and pregnancy outcomes.[39] Screening for and addressing substance use is an important part of prenatal care.

- Genetics: Twin studies suggest that GWG is partially explained by genetic predisposition, likely through influences on metabolism, appetite, and weight set point. However, genetics are not destiny and lifestyle modifications can still have significant impacts on weight gain and health for all women.

Providers should assess dietary and lifestyle factors at prenatal visits and provide counseling to help women meet nutrition and physical activity guidelines. This may involve referrals to dietitians or lifestyle intervention programs with experience in prenatal populations. Particular attention should be paid to addressing barriers to healthy eating and exercise, like limited access to nutritious foods and safe places for physical activity.

**Management of Gestational Weight Gain in Clinical Practice**

Effective management of GWG requires a multipronged approach that incorporates routine screening and monitoring, patient education, and targeted interventions for

women with or at risk for unhealthy weight gain.

Preconception care visits offer a key opportunity to assess weight status, provide counseling on the importance of a healthy weight and lifestyle, and make referrals to facilitate weight loss if needed prior to pregnancy. Women should be encouraged to enter pregnancy as close to a normal BMI as possible to reduce the risk of complications.[40]

At the initial prenatal visit, providers should document height and weight to calculate pre-pregnancy BMI and determine the appropriate GWG target range. This visit is also a good time to assess the woman's knowledge about healthy weight gain and provide education on calorie and nutrient needs during pregnancy.

Weight should be measured and tracked at each subsequent prenatal visit. Providers can share a woman's weight gain graph and discuss how it aligns with recommendations, using positive, nonjudgmental language.[41] Praising those who are gaining appropriately and sensitively addressing any excessive or insufficient gain is more effective than simply stating current weight.

For women whose GWG is outside the optimal range, additional counseling and interventions may be warranted:

- Nutrition counseling: Referral to a registered dietitian can help women develop an individualized meal plan that meets micronutrient needs and promotes healthy GWG.[41] Dietitians can also address issues like disordered eating patterns and food insecurity that may be contributing to unhealthy gain.

- Physical activity counseling: Encouraging women to engage in regular moderate intensity physical activity and reduce sedentary time can help manage GWG.[46] This may involve exploring activity preferences, problem-solving barriers, and connecting women to resources like group exercise classes tailored to pregnant women.

- Behavioral interventions: Programs that combine nutrition education, physical activity promotion, and behavioral modification techniques like self-monitoring and goal setting have been shown to reduce excess GWG and

postpartum weight retention. Delivery by trained lifestyle coaches and use of technology tools can enhance engagement and outcomes.

- Pharmacotherapy: In women with obesity who are at high risk of GWG-related complications, adjunct pharmacotherapy may be considered. Metformin and low-dose aspirin have been used in research to limit GWG and improve insulin sensitivity in obese pregnant women, although efficacy data are limited and they are not routinely recommended.[42]

- Postpartum management: The first year after delivery is a critical window for addressing postpartum weight retention and promoting long-term weight management.[43] Providers should continue to monitor weight status, encourage healthy eating and physical activity, and make referrals to nutrition and behavioral intervention resources as needed. Emphasizing the benefits of postpartum weight loss for future pregnancies and overall health may increase motivation.

Importantly, all counseling related to GWG should be delivered using patient-centered communication strategies like motivational interviewing.[44] Providers should elicit the woman's feelings about weight gain, address ambivalence and barriers to change, and support her autonomy in setting goals. Using a respectful, compassionate approach can foster a trusting relationship and lead to better outcomes.

**Postpartum Weight Retention and Long-Term Maternal Health**

Pregnancy is a significant event that can have lasting impacts on a woman's weight trajectory and health. On average, women retain 2-5 lbs at 6-18 months postpartum, and a large proportion experience significant weight retention (> 10 lbs) that persists long-term. Excess GWG is a major predictor of postpartum weight retention, with each additional pound gained increasing the risk.[31]

Failure to lose excess pregnancy weight can lead to increased BMI at the start of subsequent pregnancies, raising the risk of recurrent excess GWG and worsening obesity.] Having a higher BMI and greater GWG in future pregnancies then further amplifies postpartum weight retention, creating a vicious cycle. Breaking this pattern is important for supporting optimal health in both current and future pregnancies.

Postpartum weight retention also has consequences for long-term maternal health outside of pregnancy. Women who fail to lose weight after delivery are at elevated risk of chronic diseases like obesity, type 2 diabetes, cardiovascular disease, and certain cancers later in life.[44] The postpartum period represents a critical window to intervene and promote healthy lifestyle habits that can reduce disease risk.

However, the postpartum period also poses unique challenges for weight management. New mothers face significant barriers to healthy eating and physical activity, including fatigue, time constraints, childcare responsibilities, and lack of social support. Postpartum depression, which affects 10-15% of women, can further hinder weight loss efforts.[45]

Innovative strategies are needed to engage postpartum women in weight management interventions. Home-based or mobile health programs that deliver content via smartphone app, website, or telehealth may help overcome some barriers. Interventions that involve partners or other family members appear to enhance support and adherence.[46] Targeting the postpartum visit for weight loss counseling and providing ongoing follow up may also improve outcomes.[47]

Beyond individual-level approaches, policy and systems changes are necessary to create an environment conducive to postpartum weight management. This includes enacting paid parental leave policies, increasing access to affordable childcare, improving the availability of healthy foods in underserved communities, and creating more opportunities for physical activity.[48-51] Proactive efforts across multiple sectors can help support women's ability to prioritize their health during a challenging yet critical period.

**RECENT STUDIES:**

Ma Z and colleagues (2024) conducted a study aiming to explore the relationships between maternal pre-pregnancy body mass index (BMI) and gestational weight gain (GWG) trajectories with adverse pregnancy outcomes (APOs). The cohort study included 2174 pregnant women who were followed throughout their pregnancies to monitor weekly weight gain and record pregnancy outcomes. The findings revealed that women with pre-pregnancy overweight/obesity had significantly higher adjusted

odds ratios (ORs) for risks of large for gestational age (LGA), macrosomia, gestational diabetes mellitus (GDM), and hypertensive disorders of pregnancy (HDP) compared to those with normal weight. Conversely, underweight women had lower ORs for these APOs except HDP. Additionally, the risk of small for gestational age (SGA) and low birth weight (LBW) was significantly increased in the underweight group compared to the normal-weight group. However, this risk did not decrease in the overweight/obese group. Furthermore, GWG trajectories were divided into four groups, with varying proportions of participants. After adjusting for confounding factors, women in the slow GWG trajectory group had a higher risk of LGA compared to those in the extremely slow GWG trajectory group. Conversely, women in the moderate and rapid GWG trajectory groups had lower risks of SGA and LBW but higher risks of macrosomia and LGA. The study also found that different GWG trajectories did not significantly affect the risk of HDP.[52]

In another study by Pedersen DC and colleagues (2022), the association between a woman's birth weight, childhood height, BMI, and changes in height and BMI from childhood to pregnancy with preterm delivery was investigated. This study included 47,947 nulliparous women born between 1940 and 1996, with information on birth weight and childhood heights and weights at ages 7 and/or 13 years. Gestational age and prepregnancy BMI were obtained from registries. The results showed that a woman's birth weight and childhood height were inversely associated with the risk of very and moderately preterm delivery. Childhood BMI had a U-shaped association with very preterm delivery. Short stature in childhood and adulthood was associated with higher risks of very and moderately preterm delivery. Furthermore, changes from a BMI at the 85th percentile at 7 years to a prepregnancy BMI of 22.5 kg/m² were associated with different risks of very and moderately preterm delivery compared to a reference woman at the 50th percentile at 7 years.[53]

Baxi and colleagues (2021) conducted a prospective, multi-centric study aiming to investigate the prevalence, gestational weight gain (GWG), various pregnancy outcomes, and the relationship between pre-pregnancy BMI and GWG with adverse pregnancy outcomes among underweight, overweight, or obese pregnant women. The study, which enrolled 226 pregnant women with gestation week ≤20 weeks in Ahmedabad, Gujarat, observed that 19.47% were underweight, 60.62% were normal

weight, 13.27% were overweight, and 6.64% were obese. The incidence of caesarean delivery was higher in nuclear families (56.92%) compared to joint families (46.92%). It was found that mothers who consumed no junk food had a lower likelihood of low birth weight (LBW) compared to those who did. Additionally, women who consumed one glass of milk daily or one fruit daily had a higher likelihood of normal delivery. The study noted a decrease in the risk of caesarean delivery with an increase in maternal hemoglobin level from 9.0 gm/dl to 12.0 gm/dl. Furthermore, a negative correlation was observed between GWG and pre-pregnancy BMI, indicating that as pre-pregnancy BMI increased, GWG decreased. The incidence of preterm delivery was lower in the normal BMI range. Moreover, the average infant birth weight decreased as maternal BMI range decreased, with the highest birth weight observed in obese women. The incidence of LBW was lower in normal and overweight women compared to obese and underweight women. Overall, the study highlights the impact of GWG, family type, dietary factors, and maternal hemoglobin concentration on pregnancy outcomes.[54]

In a separate study, Lefizelier et al. (2021) conducted a retrospective case-control study to investigate the association between prepregnancy underweight BMI and preterm birth (PTB) and small-for-gestational age (SGA). The study included 814 women with live singleton fetuses in vertex presentation who gave birth between January 2016 and November 2016 in two tertiary care hospitals. The study group comprised women with prepregnancy BMI underweight (<18.5 kg/m2), while the control group consisted of women with normal prepregnancy BMI (18.5–24.9 kg/m2), matched for age and parity. The study found that compared to the control group, the study group had higher rates of overall PTB, iatrogenic PTB, and SGA. Multivariable analysis revealed that prepregnancy underweight BMI was significantly associated with PTB and SGA, with adjusted odds ratios of 2.32 and 2.38, respectively. The findings suggest that in singleton pregnancies, prepregnancy underweight BMI is associated with an increased risk of PTB and SGA neonates. Identifying this high-risk group is crucial for healthcare providers to optimize perinatal outcomes among underweight women.[55]

Pigatti Silva and colleagues (2019) conducted a secondary analysis of a multicentre cross-sectional study, along with a nested case-control study, to assess the relationship

between maternal BMI, GWG categories, and different subtypes of preterm birth (PTB) along with perinatal outcomes. Their study, conducted across 20 centers in Brazil, found that pre-pregnancy underweight was associated with a reduced risk of provider-initiated PTB, while overweight and obesity increased the risk of provider-initiated PTB and decreased the risk of spontaneous PTB. Insufficient GWG was linked to a higher prevalence of spontaneous PTB and preterm premature rupture of membranes, while excessive GWG correlated with a higher prevalence of provider-initiated PTB or preterm premature rupture of membranes. Regardless of initial BMI, a higher rate of GWG was associated with a greater predicted probability of all PTB subtypes, except for spontaneous PTB in underweight and normal BMI women. On multivariate analysis, initial BMI emerged as the sole factor associated with provider-initiated PTB. This suggests that future studies assessing PTB risk should consider the differential role of GWG based on initial BMI and PTB subtype.[56]

Abdulmalik and colleagues (2019) reported on the characteristics and determinants of pre-pregnancy BMI and GWG among MINA participants, as well as birth outcomes. Their study included 272 pregnant women recruited during the first trimester from primary healthcare centers and private clinics in Beirut and Doha. They found that 42.1% of women had a pre-pregnancy BMI ≥25 kg/m2, with significantly higher rates in Qatar compared to Lebanon. Only 30.2% of women had adequate GWG, while 25.7% had insufficient and 44.1% had excessive GWG. Among infants, 68.7% had a weight adequate-for-gestational age, while 6.7% were small-for-gestational age and 24.6% were large-for-gestational age. The proportion of large-for-gestational age infants increased with greater GWG. After adjustment, Qatari women were three times more likely to be overweight or obese before pregnancy, while a higher education level was associated with significantly lower odds of pre-pregnancy BMI ≥25 kg/m2. Pre-pregnancy BMI ≥25 kg/m2 and regular breakfast consumption were predictors of excessive GWG. The study underscores the need for culture-specific intervention programs to promote healthy body weight in women of childbearing age and prevent excessive weight gain during pregnancy, particularly among MINA participants.[57]

Faucher and colleagues (2016) conducted a study to investigate the correlation between gestational weight gain (GWG) and the risk of preterm birth in obese

women. Their analysis included six studies, predominantly from the USA, with a total of 10,171 obese women. Meta-analysis revealed significant heterogeneity among the studies. The results indicated that obese women with gestational weight gain above the Institute of Medicine's recommendations had an increased risk of indicated preterm birth (adjusted odds ratio 1.54; 95% CI 1.09-2.16).[58]

Huang et al. (2016) aimed to assess the association between the rate of gestational weight gain and preterm birth across different pre-pregnancy body mass index (BMI) categories and trimesters. Their study, involving pregnant women, found that excessive weight gain occurred in 57.9% of the participants, while 12.5% experienced insufficient weight gain. They observed a U-shaped relationship between the average rate of gestational weight gain in the second and third trimesters and preterm birth, with varying associations based on pre-pregnancy BMI categories. For underweight women, excessive gestational weight gain was positively associated with preterm birth, whereas insufficient weight gain was associated with preterm birth in overweight/obese women. Stratifying by trimester revealed that excessive weight gain in the third trimester significantly increased the risk of preterm birth.[59]

Sharma and colleagues (2016) hypothesized that low gestational weight gain (GWG) in the second and third trimesters might elevate the risk of preterm delivery (PTD) among women with a body mass index (BMI) <25 kg/m2. Their study included singleton pregnancies from 2000 to 2008 among women with a BMI <25 kg/m2 who received prenatal care within an integrated healthcare system. They found a U-shaped relationship between GWG rate and the odds of PTD, with increased odds observed in the lowest and highest quartiles of GWG rate compared to the second quartile. Stratification by reason revealed that low GWG rate was associated with spontaneous PTD, while high GWG rate was linked to preterm premature rupture of membranes (PROM) and medically indicated PTD.[60]

Vinturache and colleagues (2014) conducted a secondary analysis of the All Our Babies Cohort to assess the influence of maternal pre-pregnancy overweight and obesity on pregnancy, labor, and delivery outcomes in women with term, singleton pregnancies. The study included 1996 pregnancies, with 65.8% normal weight, 23.6% overweight, and 10.6% obese women. Findings revealed that increased pre-pregnancy BMI was associated with higher rates of pregnancy complications such as

preeclampsia and gestational diabetes. While spontaneous onset of labor was more common in women with normal BMI, overweight and obese women were more likely to have labor induced. Among induced labors, obesity significantly increased the risk of delivery by C-section.[61]

Lynch et al. (2014) conducted a retrospective cohort study involving 11,726 women to examine associations between prepregnancy maternal BMI and the clinical presentations of preterm birth (PTB). Their findings showed a higher incidence of PTB at the extremes of BMI. Specifically, there was a higher risk of spontaneous preterm labor at lower BMI levels and a higher risk of preterm premature rupture of membranes at higher BMI levels. Additionally, both lower and higher BMI extremes were associated with a higher risk of medically indicated PTB.[62]

Cnattingius and colleagues (2013) investigated the associations between early pregnancy BMI and the risk of preterm delivery by gestational age and precursors of preterm delivery. Analyzing 1,599,551 deliveries, they found that risks of extremely, very, and moderately preterm deliveries increased with BMI, with the highest risks observed for extremely preterm delivery. Among normal-weight women, the rate of extremely preterm delivery was lowest, while overweight and obese women had progressively higher rates. Spontaneous extremely preterm delivery risk increased with BMI among obese women, while medically indicated preterm deliveries increased with BMI among overweight and obese women.[63]

Li and colleagues (2013) conducted a study in Tianjin, China, to investigate the individual and combined effects of maternal prepregnancy BMI and gestational weight gain (GWG) on pregnancy outcomes. Their findings revealed that higher maternal prepregnancy BMI was associated with increased risks of gestational diabetes mellitus (GDM), pregnancy-induced hypertension, cesarean delivery, preterm delivery, large-for-gestational-age infant (LGA), and macrosomia. Conversely, lower maternal prepregnancy BMI was associated with increased risks of small-for-gestational-age infant (SGA) and low birth weight. Excessive GWG was linked to higher risks of pregnancy-induced hypertension, cesarean delivery, LGA, and macrosomia, but lower risks of preterm delivery, SGA, and low birth weight. Inadequate GWG increased the risks of preterm delivery and SGA but decreased the risks of LGA and macrosomia compared to adequate GWG. Additionally, women

with both prepregnancy obesity and excessive GWG faced significantly higher risks of GDM, pregnancy-induced hypertension, cesarean delivery, LGA, and macrosomia compared to women with normal prepregnancy BMI and adequate GWG.[64]

Meenakshi and colleagues (2012) examined maternal and fetal complications in overweight and obese women compared to those with normal BMI. They found that overweight and obese women experienced higher rates of gestational hypertension, preeclampsia, preterm delivery, induction of labor, cesarean section, increased operative time, stillbirths, early neonatal deaths, Apgar score < 7 at 5 min, and admission to the neonatal intensive care unit (NICU) compared to women with normal BMI. However, there were no significant differences among the groups regarding hypoglycemia, hyperbilirubinemia, and respiratory distress.[65]

Kosa and colleagues (2011) investigated the relationship between pre-pregnancy BMI and preterm delivery (PTD) using both traditional BMI categories and continuous BMI. Their study, based in California, included women who participated in the state's prenatal screening program, worked during pregnancy, and delivered a live singleton birth in Southern California. They found that while higher BMI up to around 24 kg/m2 was increasingly protective against preterm delivery, a higher body mass index beyond this threshold became detrimental. The study suggested that current BMI categories may not effectively identify women at higher risk for PTD.[66]

Wise and colleagues (2010) explored the risk of preterm birth in African-American women concerning prepregnancy BMI, waist circumference, adult weight gain, and gestational weight gain. Their analysis of prospective data from the Black Women's Health Study revealed that women with prepregnancy BMI <18 were at increased risk of spontaneous preterm birth (SPTB) and medically indicated preterm birth (MPTB), while obese women (BMI ≥30) were at increased risk of MPTB. They also found associations between central adiposity, adult weight gain, gestational weight gain, and preterm birth, with variations based on BMI categories and gestational age.[67]

Torloni and colleagues (2009) conducted a systematic review to explore the association between high prepregnancy maternal BMI and the risk of preterm birth (PTB). Their analysis of 39 studies involving over 1.7 million women revealed nuanced associations based on BMI categories. Preobese and obese I women showed

a reduced risk for spontaneous preterm birth (sPTB) but an increased risk for moderate PTB. However, obese II and III women exhibited an increased risk for PTB in general, moderate, and very preterm birth categories. Notably, high BMI did not modify the risk for preterm premature rupture of membranes (PPROM) but increased the risk for elective PTB.[68]

# *MATERIALS AND METHODS*

# MATERIAL AND METHODS

**Study design:** Cross-sectional study, Hospital based study

**Study Place:** Santosh Hospital

**Minimum Sample Size Required:** 354 mothers (with 95% confidence interval and 5% margin of error)

**Sampling Frame:** study population includes all the females in 2nd and 3rd trimester visiting Santosh hospital

**Used Formula:** $n = [DEFF*Np(1-p)]/ [(d^2/Z^2_{1-\alpha/2}*(N-1)+p*(1-p)]$

**Ethical Clearance:** Ethical clearance was taken from the ethical committee at Santosh Medical College and Hospital, Ghaziabad.

**Inclusion Criteria:**

- All the females in 2nd and 3rd trimester willing to participate in study visiting santosh hospital

**Exclusion Criteria:**

- females with pre-existing chronic illness like:
  - diabetes
  - hypertension
  - heart diseases
- females not giving consent for the study
- Twin pregnancy
- abortions and still births

**METHOD OF DATA COLLECTION**

- The females in 2nd and 3rd trimester willing to participate in study visiting santosh hospital were enrolled.

  Follow-up was scheduled every 15 days in the OPD for weight measurement, and the data were entered into an Excel sheet.

  Dietary counselling was also provided during the follow-up visits.

**STATISTICAL ANALYSIS:**

The data were initially checked for completeness, and data was cleaned for errors and missing values. The corrected data was then entered into Microsoft Excel after preparing a Master-chart. Data analysis was done using licensed SPSS software version 24.0 (Chicago, Illinois). Univariate analyses was done initially and the results were presented with the help of tables, text, bar-diagrams and pie-charts. Descriptive statistics were used to calculate frequencies of categorical variables, and measures of central tendencies and dispersion were used to describe continuous variables. Independent t-test was used to compare the continuous variable and chi-square test was used for categorical variables. A p-value $<0.05$ was considered as statistically significant.

# *OBSERVATIONS*
# *&*
# *RESULTS*

# OBSERVATIONS AND RESULTS

RESULTS:

Table 1: Age (years) distribution of the mothers:

| | |
|---|---|
| Mean | 23.347 |
| Median | 23.000 |
| Std. Deviation | 3.7936 |
| Minimum | 18.0 |
| Maximum | 34.0 |

The mean age of the 354 mothers was 23.35 ± 3.79 years, with a median of 23 years. The youngest mother was 18 years old, and the oldest was 34 years.

Table 2: Distribution of study participants according to age group

| Age group | Frequency | Percent |
|---|---|---|
| ≤20 years | 99 | 28.0 |
| 21-25 years | 170 | 48.0 |
| 26-30 years | 63 | 17.8 |
| >30 years | 22 | 6.2 |
| Total | 354 | 100.0 |

The majority of mothers (170; 48.0%) were in the age group of 21–25 years, followed by 99 (28.0%) aged ≤20 years, 63 (17.8%) aged 26–30 years, and 22 (6.2%) above 30 years.

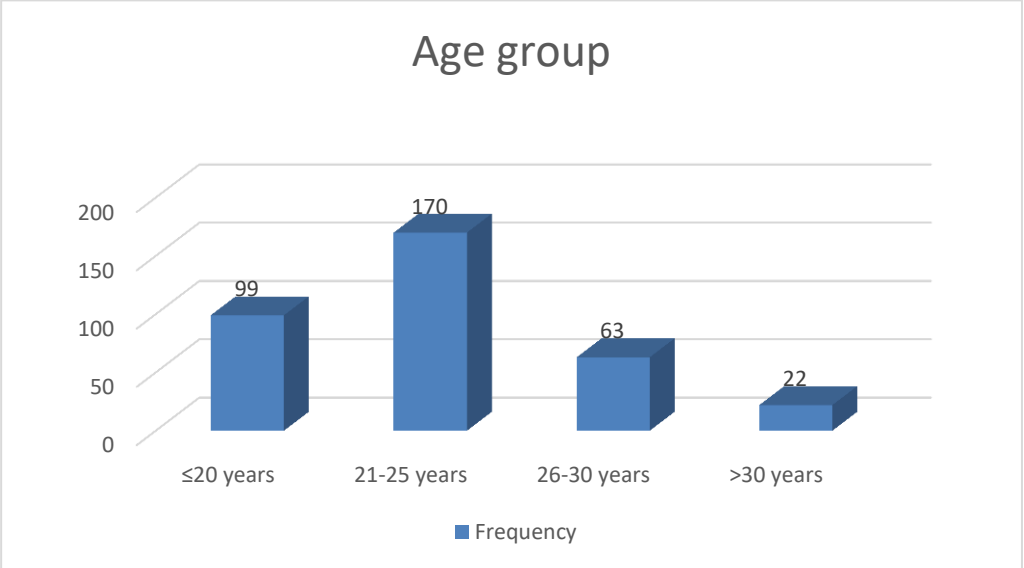


Table 3: Distribution of study participants according to education:

| Education | Frequency | Percent |
|---|---|---|
| Primary | 112 | 31.6 |
| Secondary | 123 | 34.7 |
| Higher | 119 | 33.6 |
| Total | 354 | 100.0 |

Out of 354 participants, 123 (34.7%) had secondary education, 119 (33.6%) had higher education, and 112 (31.6%) had completed only primary schooling.

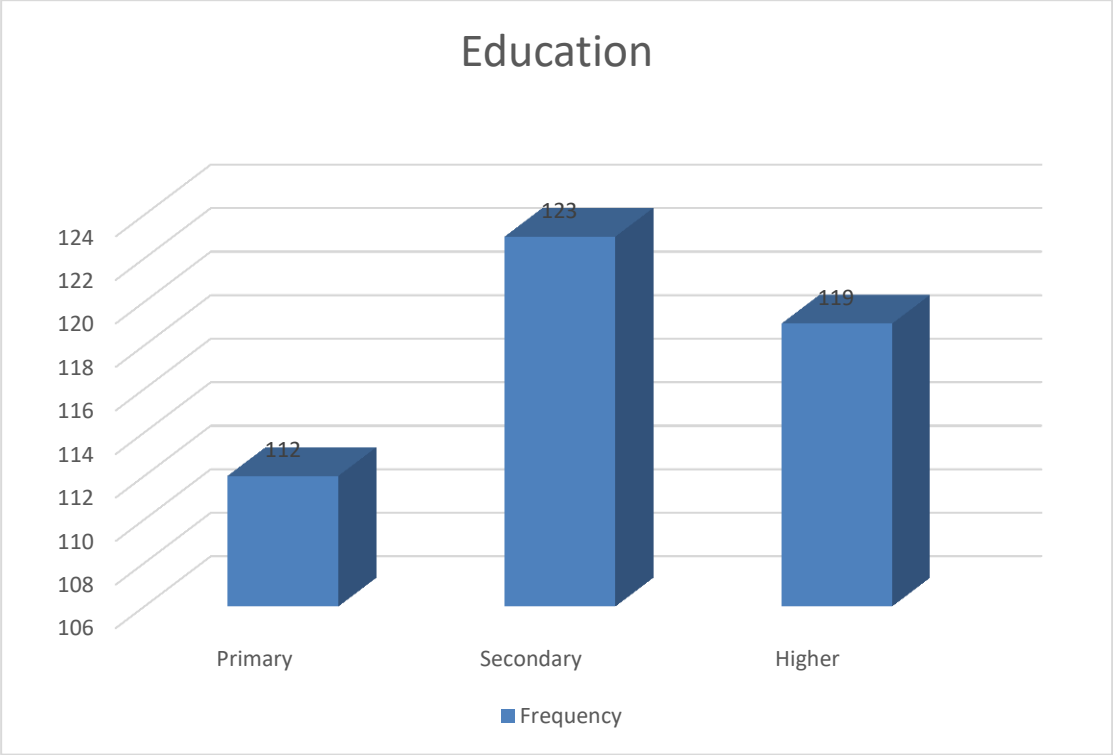


Table 4: Distribution of study participants according to occupation:

| Occupation | Frequency | Percent |
|---|---|---|
| Daily wage labourer | 30 | 8.5 |
| Engineer | 15 | 4.2 |
| Government Job | 10 | 2.8 |
| Home maker | 246 | 69.5 |
| Private Job | 44 | 12.4 |
| Teacher | 9 | 2.5 |
| Total | 354 | 100.0 |

Most participants (246; 69.5%) were homemakers. Others included private job holders (12.4%), daily wage labourers (8.5%), engineers (4.2%), government employees (2.8%), and teachers (2.5%).

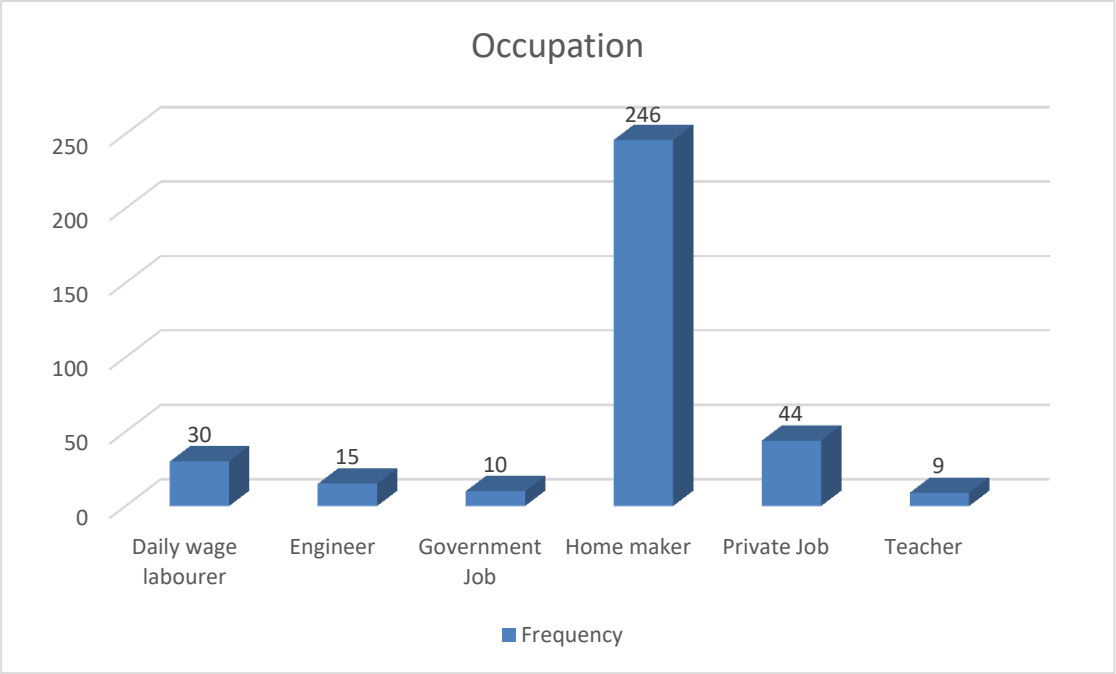


Table 5: Distribution of study participants according to type of family:

| Family type | Frequency | Percent |
|---|---|---|
| Joint | 141 | 39.8 |
| Nuclear | 213 | 60.2 |
| Total | 354 | 100.0 |

A nuclear family structure was reported by 213 (60.2%) mothers, while 141 (39.8%) belonged to joint families.

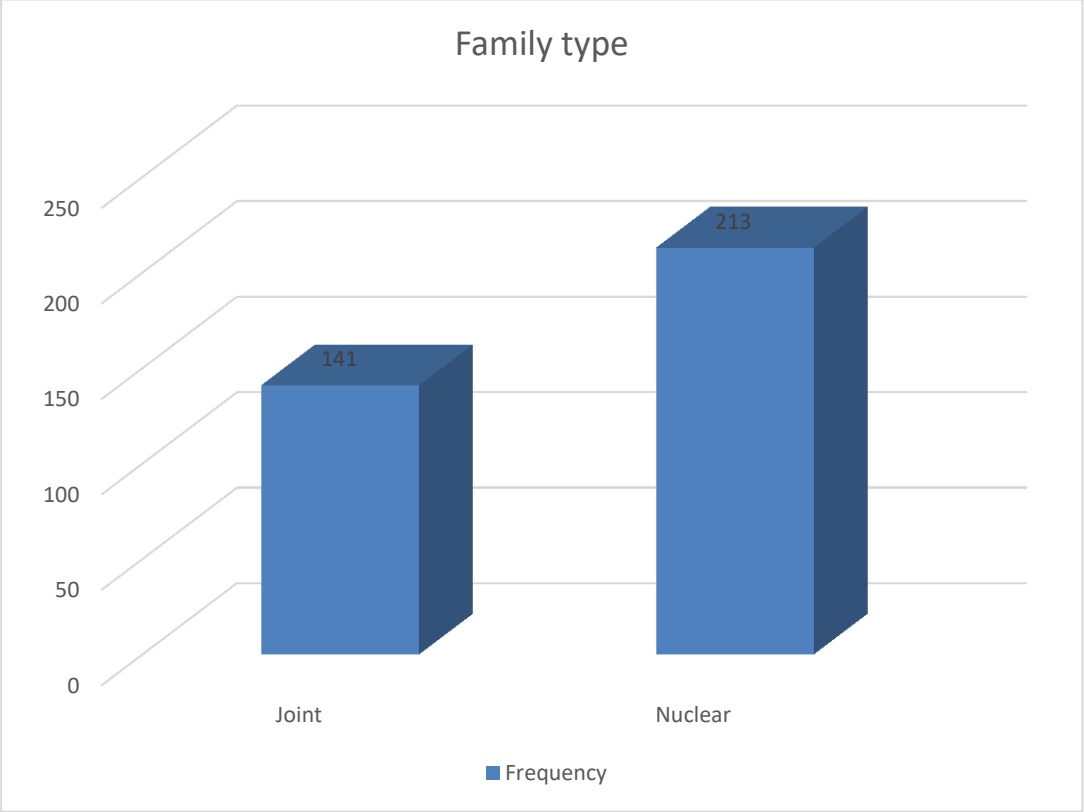


Table 6: Distribution of study participants according to Socioeconomic status:

| Socioeconomic status | Frequency | Percent |
|---|---|---|
| Lower middle | 102 | 28.8 |
| Upper | 46 | 13.0 |
| Upper Lower | 98 | 27.7 |
| Upper Middle | 108 | 30.5 |
| Total | 354 | 100.0 |

Among the participants, 108 (30.5%) belonged to the upper middle class, 102 (28.8%) to the lower middle class, 98 (27.7%) to the upper lower class, and 46 (13.0%) to the upper class.

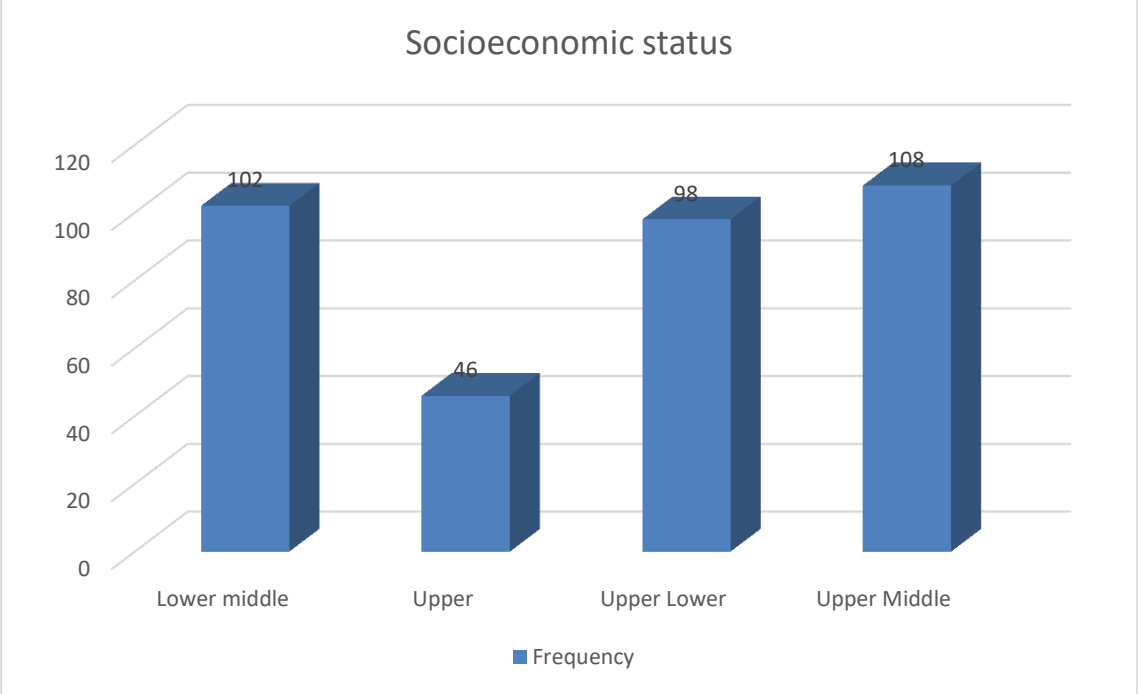


Table 7: Distribution of study participants according to gravida:

| Gravida | Frequency | Percent |
|---|---|---|
| Primigravida | 213 | 60.2 |
| Multigravida | 141 | 39.8 |
| Total | 354 | 100.0 |

Primigravida status was observed in 213 (60.2%) mothers, while 141 (39.8%) were multigravida.

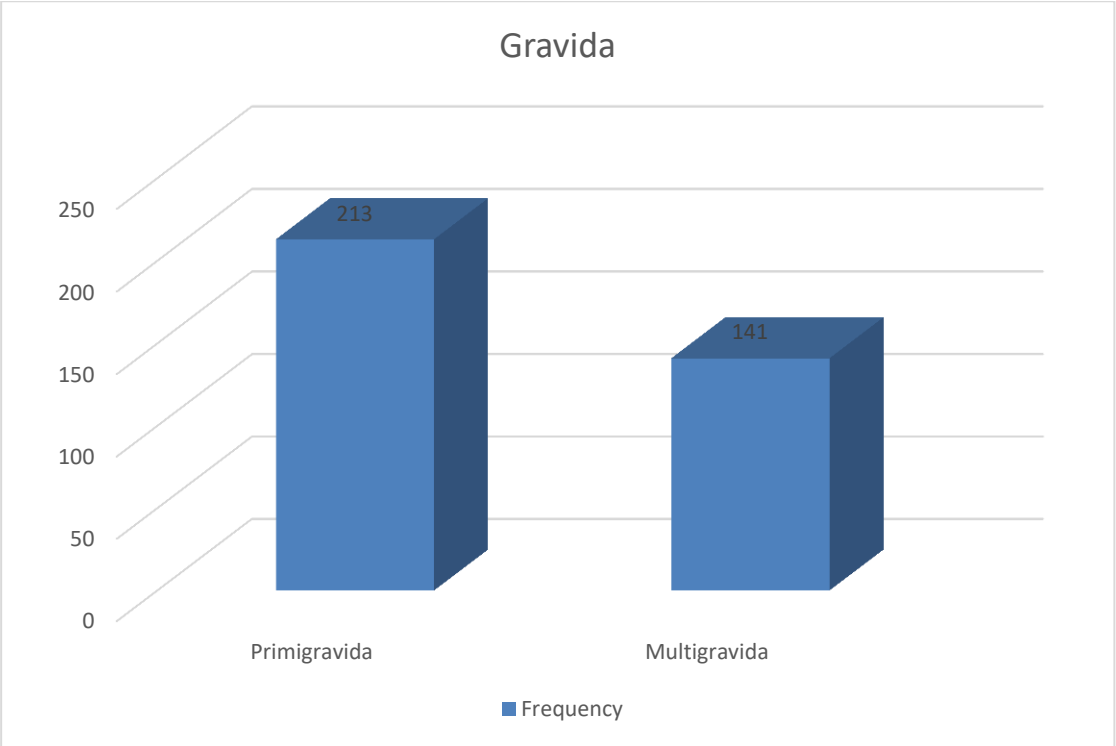


Table 8: Distribution of study participants according to abortions:

| Abortions | Frequency | Percent |
|---|---|---|
| No | 301 | 85.0 |
| Yes | 53 | 15.0 |
| Total | 354 | 100.0 |

A history of abortion was reported by 53 (15.0%) participants, while the remaining 301 (85.0%) had no such history.

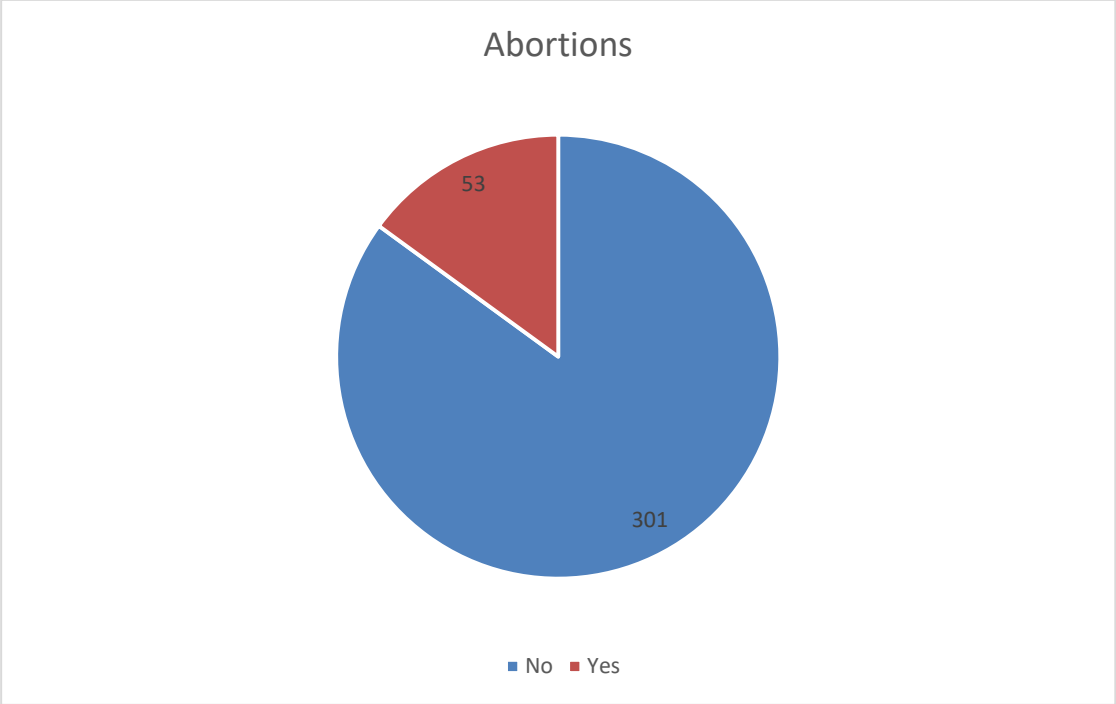


Table 9: Distribution of study participants according to birth spacing:

| Birth spacing | Frequency | Percent |
|---|---|---|
| <24 months | 50 | 14.1 |
| > 24 months | 81 | 22.9 |
| NA | 223 | 63.0 |
| Total | 354 | 100.0 |

Out of 354 mothers, 81 (22.9%) had birth spacing >24 months, 50 (14.1%) had <24 months spacing, while 223 (63.0%) were not applicable (e.g., primigravida).

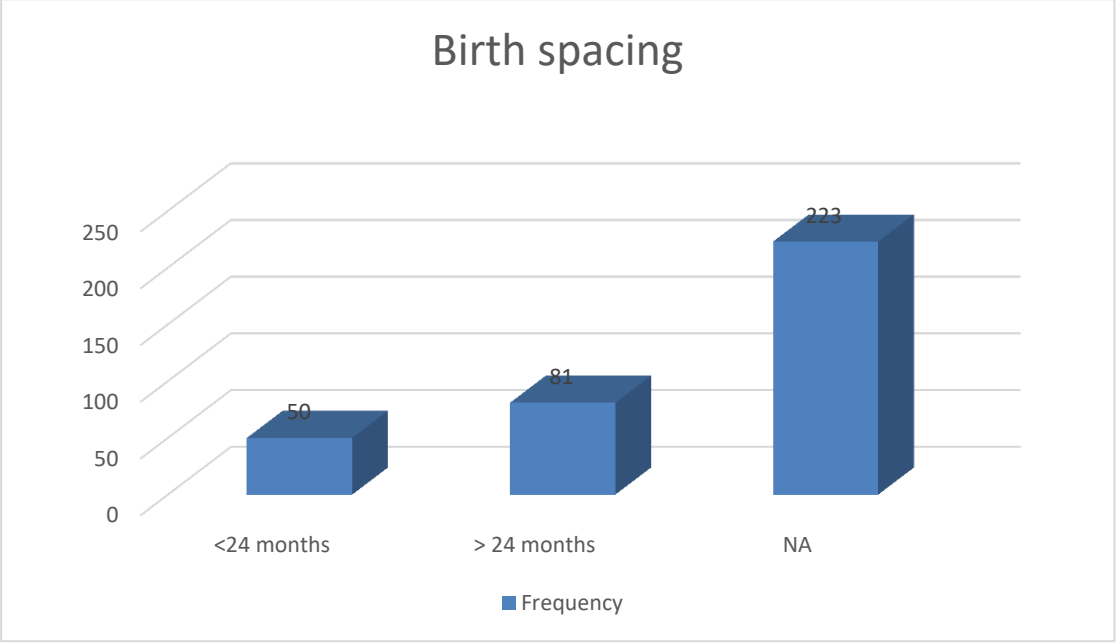
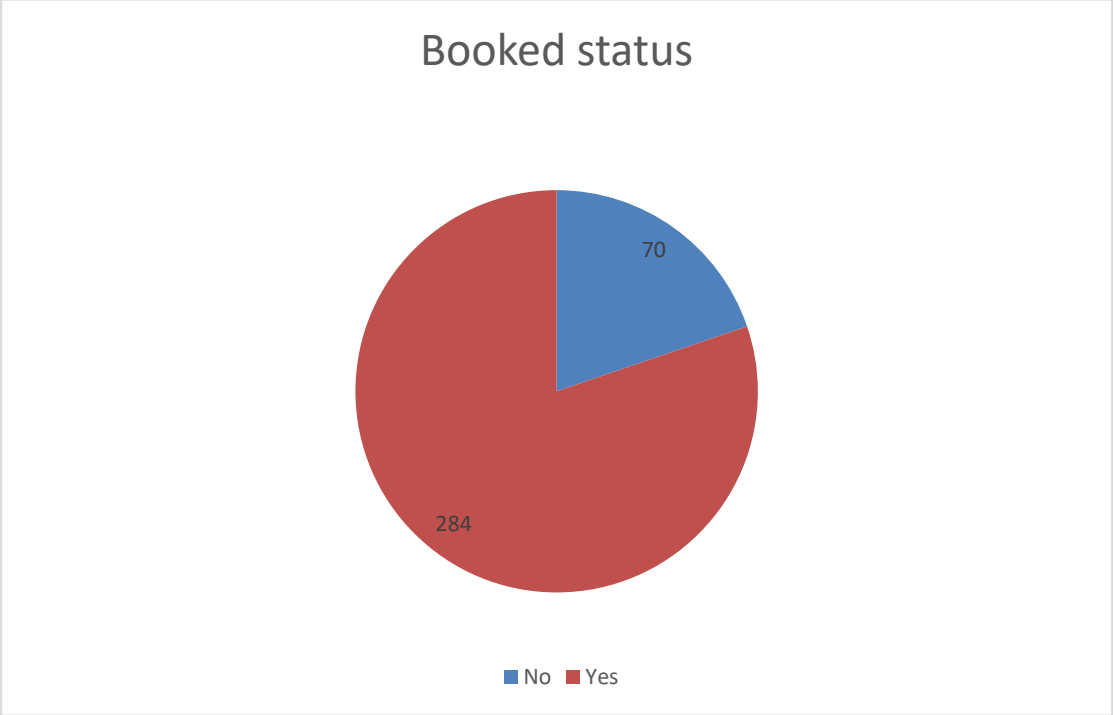


Table 10: Distribution of study participants according to booked status:

| Booked status | Frequency | Percent |
|---|---|---|
| No | 70 | 19.8 |
| Yes | 284 | 80.2 |
| Total | 354 | 100.0 |




The majority (284; 80.2%) of the participants were booked for antenatal care, while 70 (19.8%) were not.

Table 11: Distribution of study participants according anaemia:

| Anaemia | Frequency | Percent |
|---|---|---|
| Mild | 222 | 62.7 |
| Moderate | 36 | 8.2 |
| Severe | 96 | 29.1 |
| Total | 354 | 100.0 |

Most mothers had mild anaemia (222; 62.7%), followed by severe anaemia (96; 29.1%) and moderate anaemia (36; 8.2%).

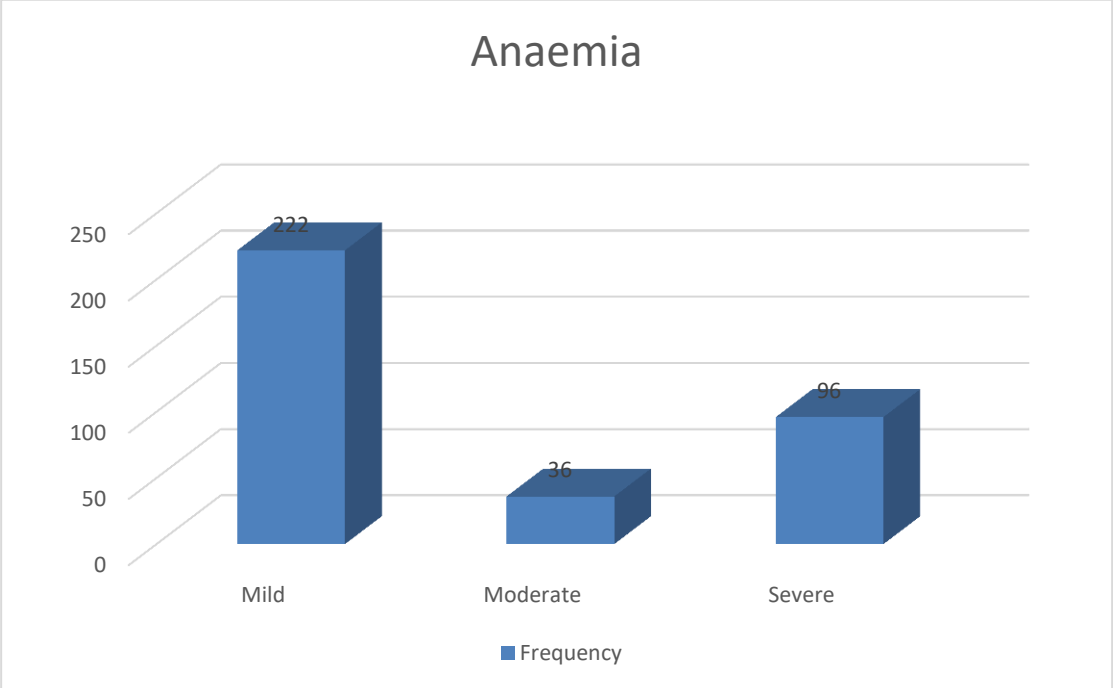


Table 12: Distribution of study participants according to anaemia type:

| Anaemia type | Frequency | Percent |
|---|---|---|
| Treated | 295 | 83.3 |
| Untreated | 59 | 16.7 |
| Total | 354 | 100.0 |

Among the anaemic mothers, 295 (83.3%) had received treatment, while 59 (16.7%) remained untreated.

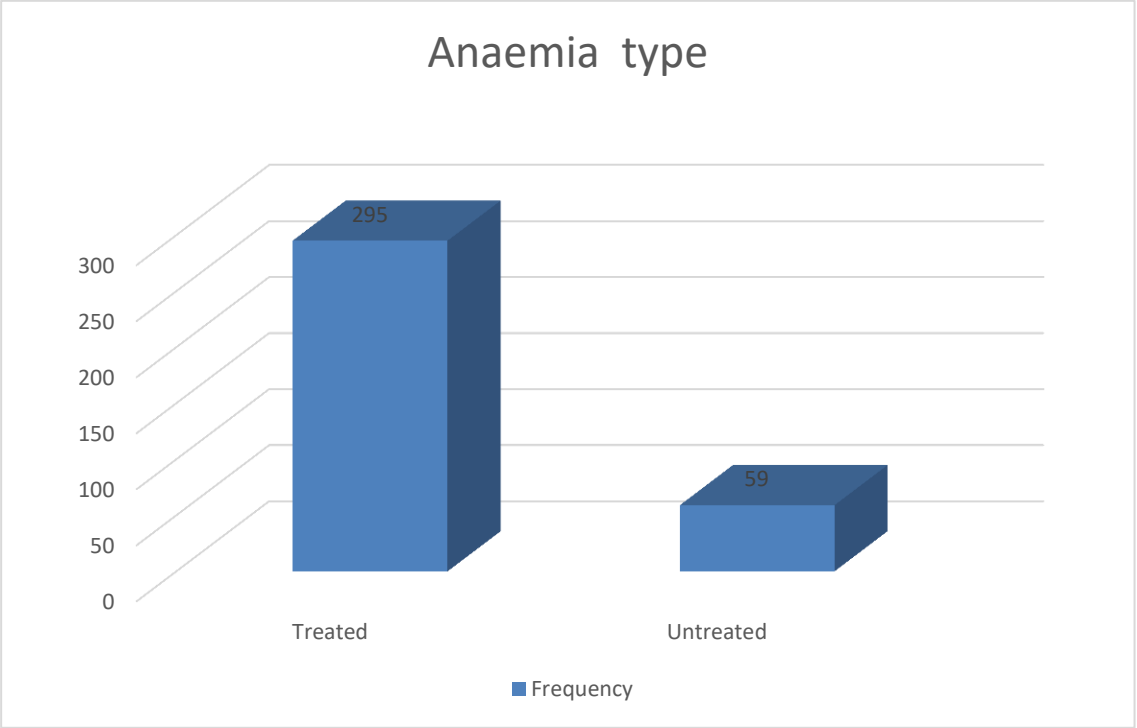


Table 13: Distribution of study participants according to other maternal history:

| History | Frequency | Percent |
|---|---|---|
| APH | 9 | 2.5 |
| PPH | 40 | 11.3 |
| PCOS history | 146 | 41.2 |
| Hypothyroidism | 124 | 35.0 |
| Gestational HTN | 19 | 5.4 |
| Preeclampsia | 11 | 3.1 |
| GDM | 19 | 5.4 |
| Stress | 12 | 3.3 |
| H/O BT | 102 | 28.8 |

PCOS history was present in 146 (41.2%) participants, hypothyroidism in 124 (35.0%), blood transfusion in 102 (28.8%), PPH in 40 (11.3%), GDM and gestational hypertension each in 5.4%, and smaller percentages for APH, preeclampsia, and stress.

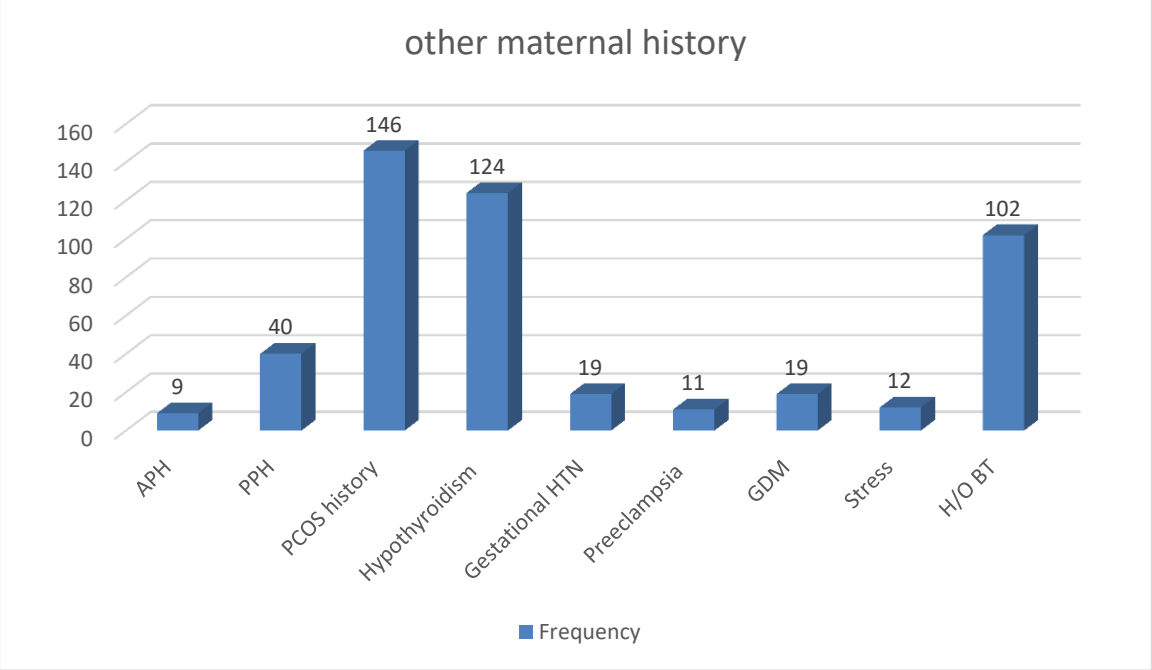


Table 14: Distribution of study participants according to dietary history :

| History | Frequency | Percent |
|---|---|---|
| Iron supplementation | 341 | 96.3 |
| Calcium supplementation | 292 | 82.5 |
| Pre conceptional FA | 85 | 24.0 |
| Post conceptional FA | 319 | 87.6 |

Iron supplementation was reported by 341 (96.3%) and calcium supplementation by 292 (82.5%). Pre-conceptional folic acid use was seen in 85 (24.0%) and post-conceptional use in 319 (87.6%).

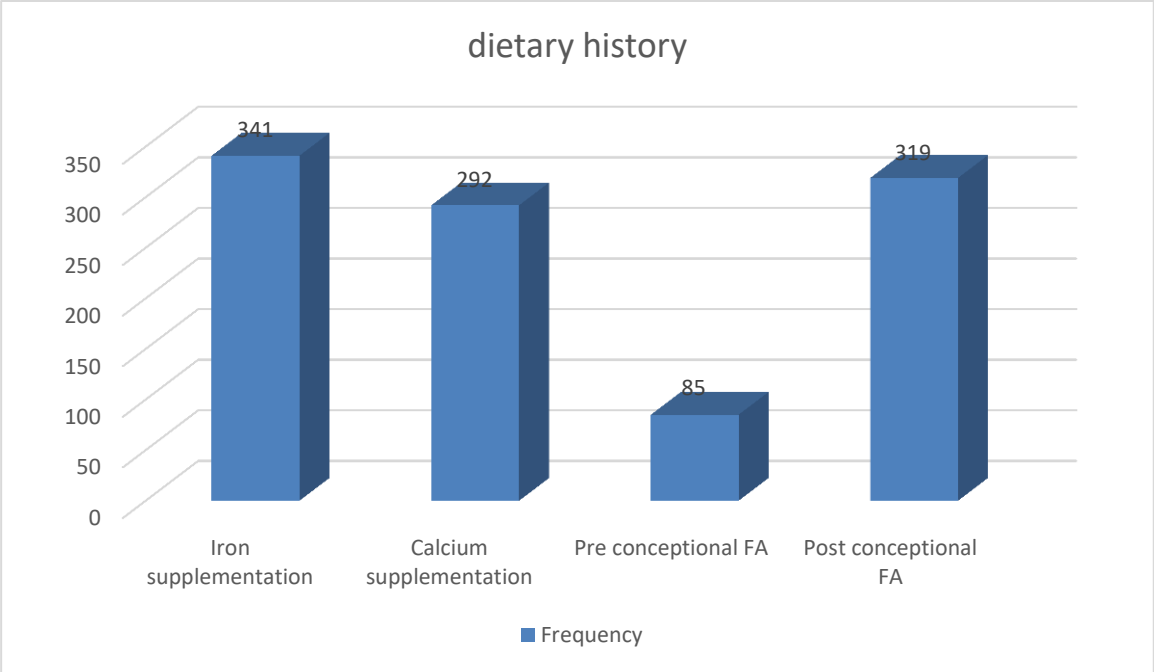


Table 15: Distribution of study participants according to mode of delivery:

| Mode of delivery | Frequency | Percent |
|---|---|---|
| LSCS | 63 | 17.8 |
| VD | 291 | 82.2 |
| Total | 354 | 100.0 |

Vaginal delivery was the most common mode (291; 82.2%), while lower segment cesarean section (LSCS) accounted for 63 (17.8%) cases.

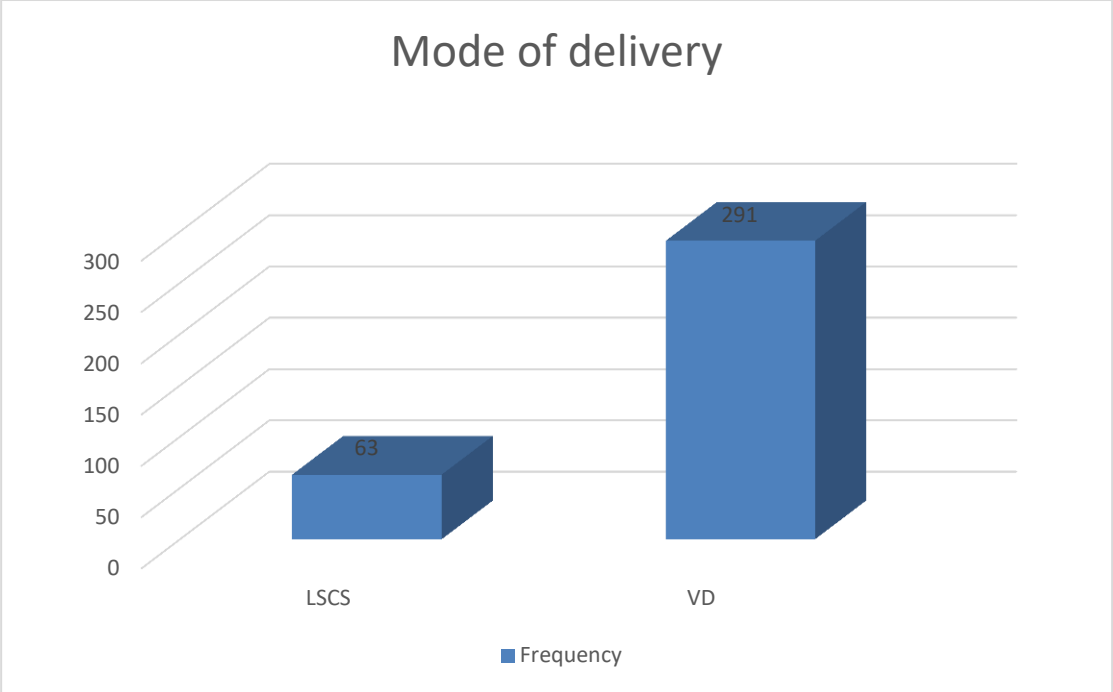


Table 16: Distribution of study participants according to gender of neonates:

| Gender | Frequency | Percent |
|---|---|---|
| Female | 150 | 42.4 |
| Male | 204 | 57.6 |
| Total | 354 | 100.0 |

Out of 354 births, 204 (57.6%) were male and 150 (42.4%) were female.

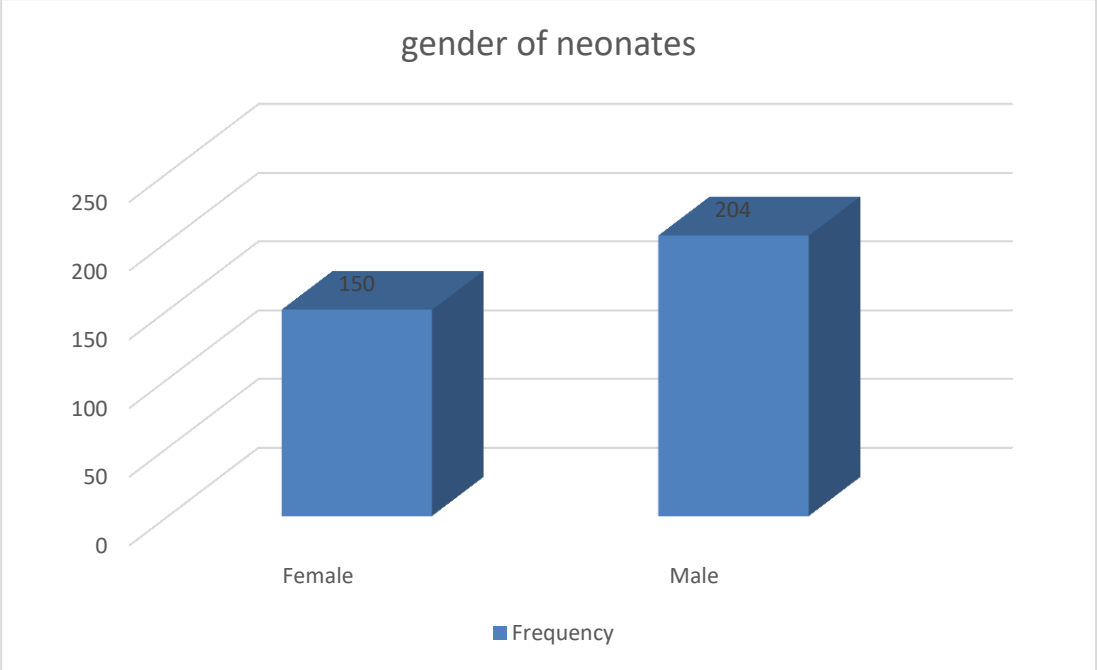


Table 17: Distribution of study participants according to NICU stay:

| NICU stay | Frequency | Percent |
|---|---|---|
| No | 282 | 79.7 |
| Yes | 72 | 20.3 |
| Total | 354 | 100.0 |

NICU admission was required in 72 (20.3%) cases, whereas 282 (79.7%) did not require NICU care.

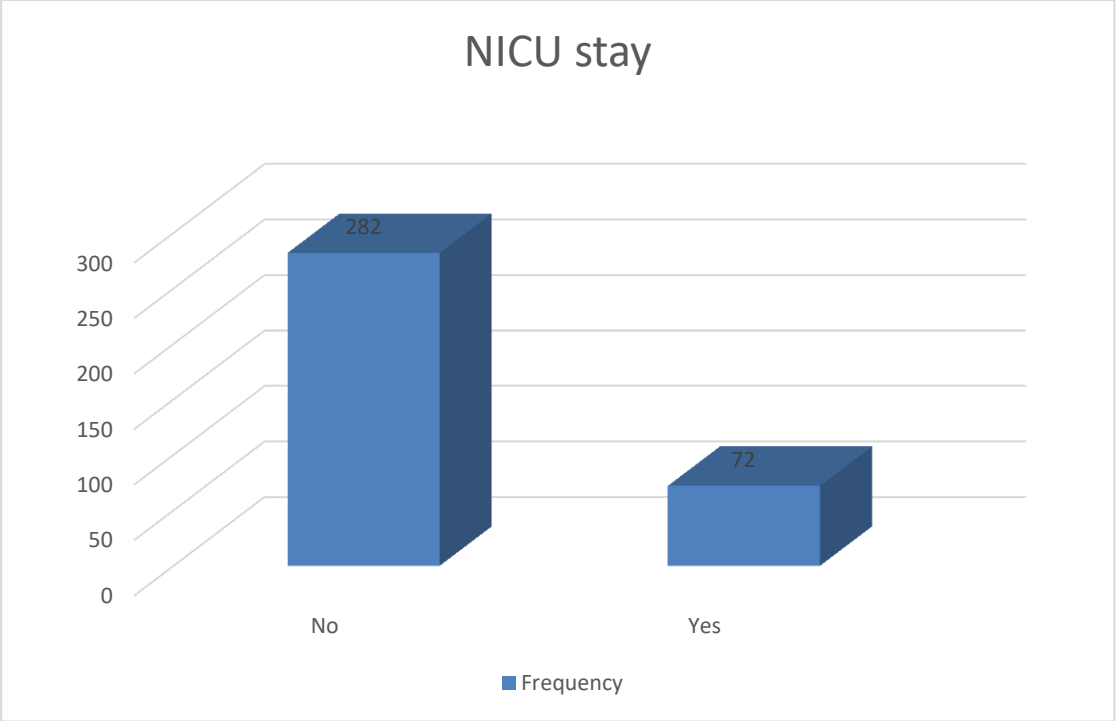


Table 18: Distribution of study participants according to APGAR:

| APGAR | Frequency | Percent |
|---|---|---|
| Excellent | 139 | 39.3 |
| Moderately depressed | 190 | 53.7 |
| Severely depressed | 25 | 7.1 |
| Total | 130 | 100.0 |

Among 130 neonates assessed, 190 (53.7%) had a moderately depressed APGAR score, 139 (39.3%) had excellent scores, and 25 (7.1%) were severely depressed.

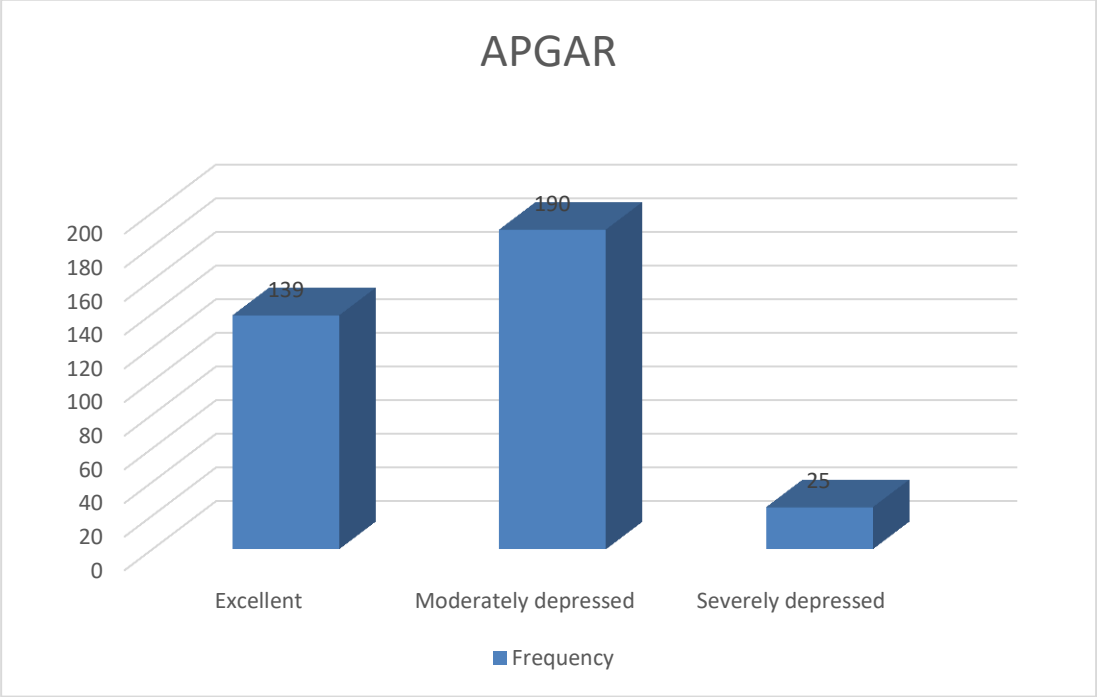


Table 19: Distribution of weight gain (kg) among study participants:

| | 1st T Wt gain | 2nd T Wt gain | 3rd T Wt gain | Overall Wt gain |
|---|---|---|---|---|
| Mean | 1.258 | 3.708 | 5.350 | 10.323 |
| Median | 1.000 | 4.000 | 5.000 | 10.000 |
| SD | .8450 | 1.1459 | 1.4069 | 2.1466 |
| Minimum | .0 | 1.0 | 1.0 | 4.0 |
| Maximum | 4.0 | 6.0 | 9.0 | 14.0 |

The mean overall weight gain during pregnancy was 10.32 ± 2.15 kg. First trimester gain averaged 1.26 kg, second trimester 3.71 kg, and third trimester 5.35 kg.

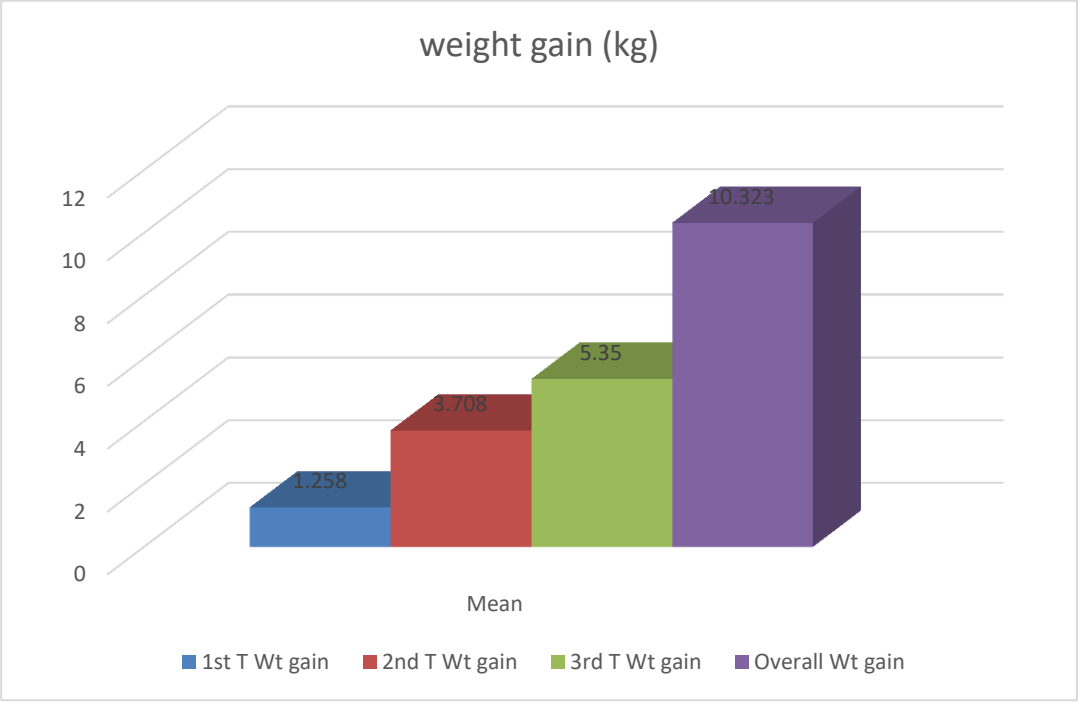


Table 20: Gestational age (weeks) distribution of the mothers:

| | |
|---|---|
| Mean | 37.638 |
| Median | 38.000 |
| Std. Deviation | 2.3394 |
| Minimum | 30.0 |
| Maximum | 40.0 |

The mean gestational age was 37.64 ± 2.34 weeks, with a minimum of 30 and a maximum of 40 weeks.

Table 20: Distribution of study participants according to preterm delivery:

| Preterm delivery | Frequency | Percent |
|---|---|---|
| Yes | 77 | 21.8 |
| No | 277 | 78.2 |
| Total | 354 | 100.0 |

Preterm delivery was observed in 77 (21.8%) participants, while 277 (78.2%) delivered at term.

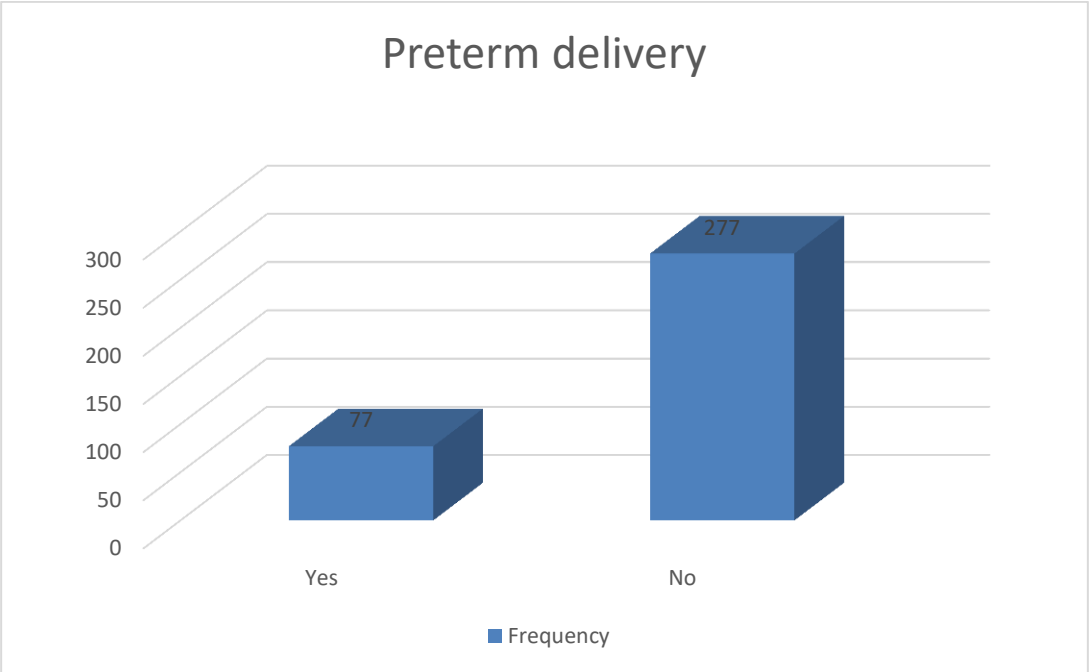


Table 21: Association of weight gain with mode of delivery:

| Mode of delivery | Mean | Std. Deviation | p-value |
|---|---|---|---|
| LSCS | 9.357 | 2.3750 | 0.0001 |
| VD | 10.347 | 2.1188 | |
| Total | 10.260 | 2.1712 | |

[[[[[[[

Mean weight gain was significantly lower in mothers who underwent LSCS (9.36 ± 2.38 kg) compared to those with vaginal deliveries (10.35 ± 2.12 kg), with a p-value of 0.0001.

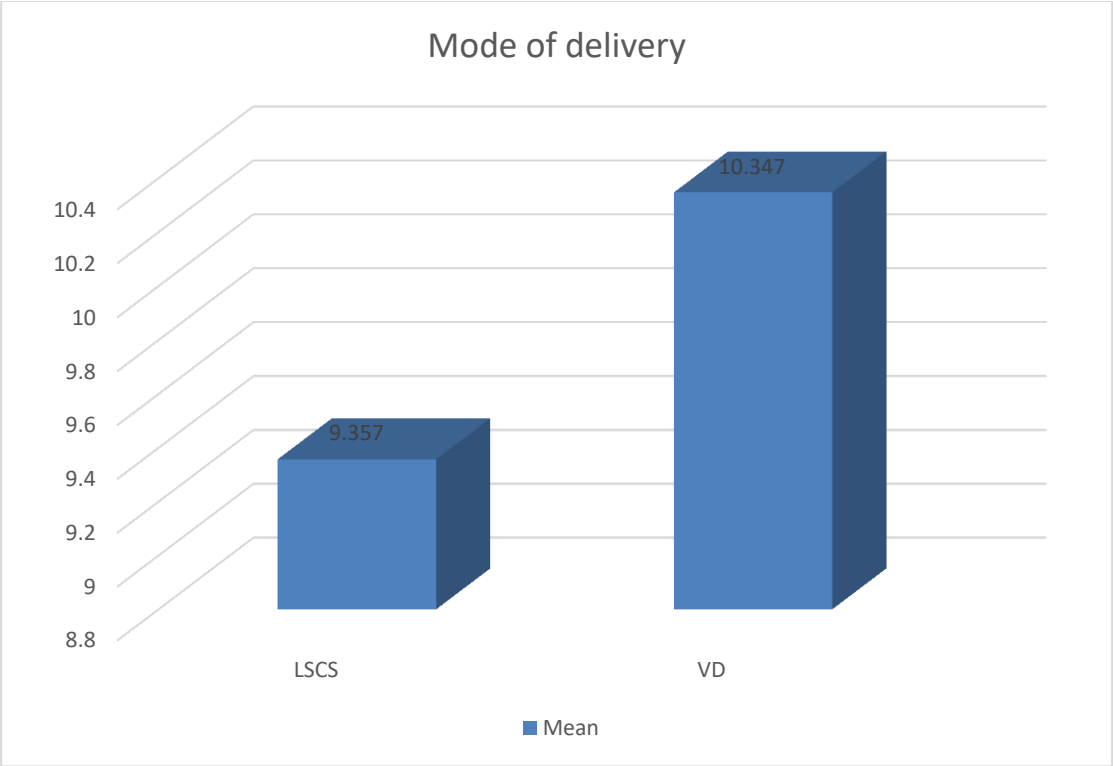


Table 22 : Association of weight gain with preterm delivery:

| Mode of delivery | Mean | Std. Deviation | p-value |
|---|---|---|---|
| Preterm | 9.366 | 2.4863 | 0.0001 |
| Term | 10.397 | 2.0592 | |
| Total | 10.260 | 2.1712 | |

Mothers with preterm delivery had lower mean weight gain (9.37 ± 2.49 kg) than those with term delivery (10.40 ± 2.06 kg), with a statistically significant p-value of 0.0001.

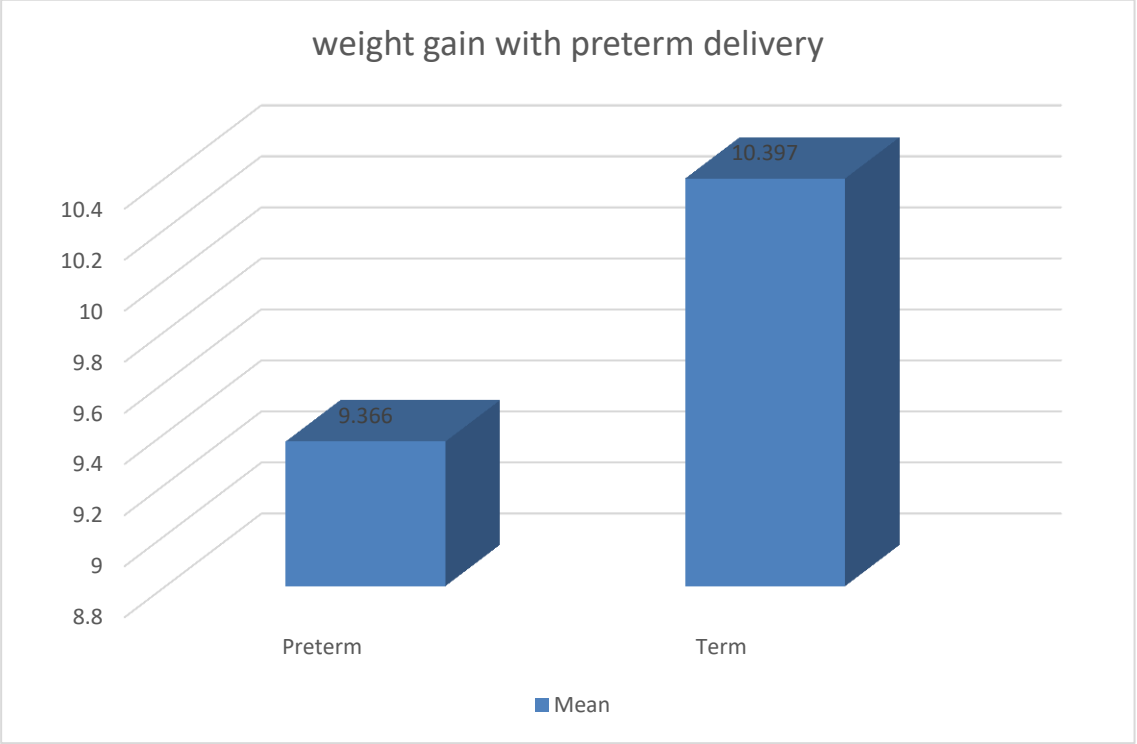


Table 24: Association of weight gain with AGA and SGA:

| AGA/SGA | Mean | Std. Deviation | p-value |
|---|---|---|---|
| AGA | 10.29 | 2.202 | 0.0001 |
| SGA | 9.102 | 1.521 | |
| Total | 10.260 | 2.1712 | |

Weight gain was significantly lower among mothers who delivered SGA babies (9.10 ± 1.52 kg) compared to those who delivered AGA babies (10.29 ± 2.20 kg), with p = 0.0001

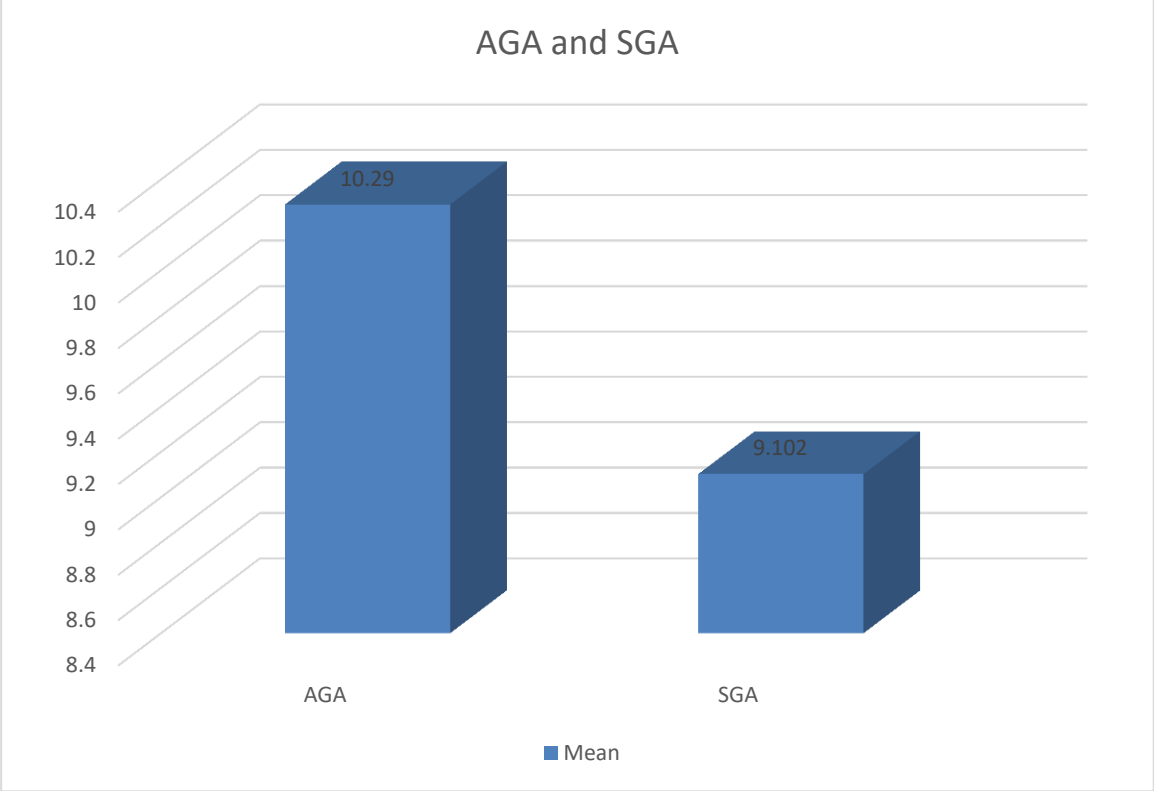


Table 25: Association of weight gain with NICU stay:

| NICU stay | Mean | Std. Deviation | p-value |
|---|---|---|---|
| No | 10.337 | 2.1747 | 0.0001 |
| Yes | 9.958 | 2.1457 | |
| Total | 10.260 | 2.1712 | |

The mean weight gain in mothers whose neonates required NICU stay was slightly lower (9.96 ± 2.15 kg) compared to those who did not (10.34 ± 2.17 kg), with a significant p-value of 0.0001.

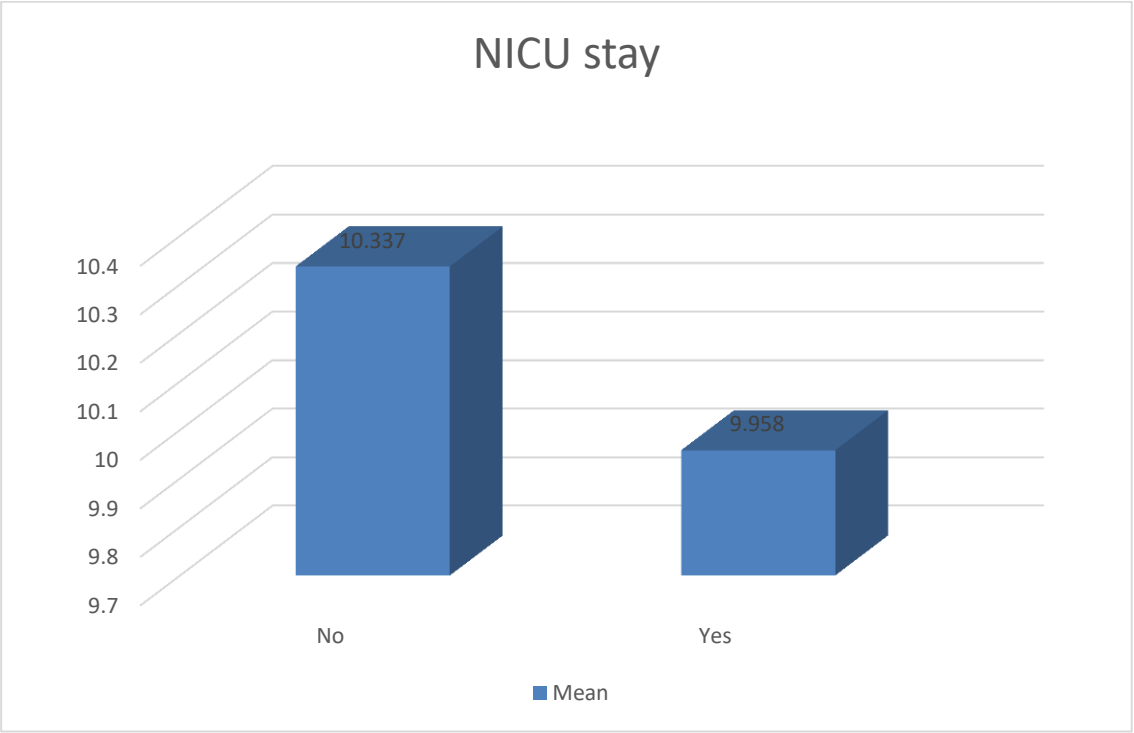


Table 26: Correlation of weight gain with various maternal fetal variables:

| | | Weight gain |
|---|---|---|
| MOTHERS AGE | Pearson Correlation | .337 |
| | p-value | .000 |
| | N | 354 |
| ANC visit | Pearson Correlation | .062 |
| | p-value | .242 |
| | N | 354 |
| BMI | Pearson Correlation | .332 |
| | p-value | .0001 |
| | N | 354 |
| GA | Pearson Correlation | .196 |
| | p-value | .0001 |
| | N | 354 |
| BW | Pearson Correlation | .231 |
| | p-value | .0001 |
| | N | 354 |
| APGAR at 1 min | Pearson Correlation | .014 |
| | p-value | .795 |
| | N | 354 |
| APGAR at 5 min | Pearson Correlation | -.097 |
| | p-value | .068 |
| | N | 354 |

Weight gain showed a significant positive correlation with maternal age ($r = 0.337$), BMI ($r = 0.332$), gestational age ($r = 0.196$), and birth weight ($r = 0.231$), all with $p < 0.001$. No significant correlation was found with number of ANC visits or APGAR scores.

# *DISCUSSION*

# DISCUSSION

## Demographic and Socioeconomic Characteristics

Our study included 354 pregnant women with a mean age of 23.35 ± 3.79 years, ranging from 18 to 34 years. The majority (48.0%) fell within the 21-25 years age group, with 28.0% aged ≤20 years, 17.8% aged 26-30 years, and only 6.2% above 30 years. This relatively young maternal age profile is consistent with the typical reproductive pattern in our region.

Regarding educational status, we observed a fairly balanced distribution with 34.7% having secondary education, 33.6% having higher education, and 31.6% having completed only primary schooling. Most participants (69.5%) were homemakers, with the remainder engaged in various occupations including private jobs (12.4%), daily wage labor (8.5%), professional roles like engineering (4.2%), government employment (2.8%), and teaching (2.5%).

In terms of family structure, 60.2% of participants reported living in nuclear families, while 39.8% belonged to joint families. This distribution reflects the gradual transition from traditional joint family structures to nuclear families in contemporary society. Socioeconomically, our participants were distributed across different classes with 30.5% belonging to the upper middle class, 28.8% to the lower middle class, 27.7% to the upper lower class, and 13.0% to the upper class.

Our demographic profile differs somewhat from the populations studied in comparable research. For instance, Abdulmalik and colleagues (2019) conducted their study across two different countries (Lebanon and Qatar) and found significant differences in maternal characteristics between these settings, highlighting the influence of cultural and regional factors on maternal BMI and gestational weight gain [57]. They noted that higher education level was associated with significantly lower odds of pre-pregnancy BMI ≥25 kg/m². Our study did not specifically analyze this relationship, but our balanced distribution across educational levels would allow for such analysis in future research.

Baxi and colleagues (2021) conducted their study in Gujarat, India, with a similar regional context to ours, and observed an interesting association between family structure and delivery outcomes, noting that the incidence of cesarean delivery was higher in nuclear families (56.92%) compared to joint families (46.92%) [54]. This finding suggests that family structure may influence pregnancy outcomes, possibly through differences in social support, lifestyle factors, or decision-making processes regarding healthcare.

The socioeconomic diversity in our study population allows for a comprehensive analysis of gestational weight gain patterns and pregnancy outcomes across different socioeconomic strata, which is important for developing targeted interventions for various population segments.

**Obstetric History and Antenatal Care**

Our study population included 60.2% primigravida and 39.8% multigravida women. This relatively high proportion of first pregnancies provides valuable insights into gestational weight gain patterns in women without previous pregnancy experiences.

History of abortion was reported by 15.0% of participants, while 85.0% had no such history. Among multigravida women, birth spacing of >24 months was observed in 22.9% of the overall cohort, while 14.1% had spacing of <24 months, with the remainder being primigravidas for whom this was not applicable.

Regarding antenatal care, a substantial majority (80.2%) of participants were "booked," meaning they had registered for and received regular antenatal care, while 19.8% were "unbooked." This high proportion of women receiving antenatal care is encouraging and suggests good access to maternal healthcare services in our study population.

Our findings regarding antenatal care access differ somewhat from studies like Sharma AJ et al. (2016), who reported that 64.2% of women in their study were booked and 35.8% were unbooked [60]. Our higher proportion of booked cases (80.2%) may reflect regional differences in healthcare access or temporal improvements in antenatal care utilization.

Anemia was highly prevalent in our cohort, with 62.7% having mild anemia, 29.1% having severe anemia, and 8.2% having moderate anemia. This high prevalence of anemia during pregnancy is a concerning finding, though it is consistent with the generally high prevalence of anemia among reproductive-age women in our region. Encouragingly, 83.3% of the anemic mothers had received treatment, while 16.7% remained untreated.

Several studies have highlighted the impact of maternal hemoglobin levels on pregnancy outcomes. Baxi and colleagues (2021) noted a decrease in the risk of cesarean delivery with an increase in maternal hemoglobin level from 9.0 gm/dl to 12.0 gm/dl [54], suggesting that addressing anemia might improve delivery outcomes. While our study did not specifically analyze this relationship, the high prevalence of anemia in our cohort indicates a need for enhanced anemia prevention and treatment strategies during pregnancy.

Regarding other maternal conditions, PCOS history was present in 41.2% of participants, hypothyroidism in 35.0%, and a history of blood transfusion in 28.8%. Smaller proportions had experienced PPH (11.3%), GDM and gestational hypertension (each 5.4%), APH, preeclampsia, and stress. This profile of comorbidities provides context for understanding the complex interplay between maternal health conditions, gestational weight gain, and pregnancy outcomes.

Nutritional supplementation was widely reported, with 96.3% receiving iron supplementation and 82.5% calcium supplementation. Pre-conceptional folic acid use was relatively low at 24.0%, though post-conceptional use was higher at 87.6%. These high rates of micronutrient supplementation reflect adherence to standard antenatal care protocols, although the lower rate of pre-conceptional folic acid supplementation suggests a need for enhanced preconception care and counseling.

**Gestational Weight Gain Patterns**

In our study, the mean overall gestational weight gain was 10.32 ± 2.15 kg, with trimester-specific gains averaging 1.26 kg in the first trimester, 3.71 kg in the second trimester, and 5.35 kg in the third trimester. This pattern of increasing weight gain as pregnancy progresses is consistent with normal physiological changes during

pregnancy, reflecting fetal growth, amniotic fluid accumulation, maternal fat deposition, and increased blood volume.

However, the overall mean weight gain of 10.32 kg is notably lower than recommendations from organizations like the Institute of Medicine (IOM), which suggests total weight gains of 12.5-18 kg for underweight women, 11.5-16 kg for normal-weight women, 7-11.5 kg for overweight women, and 5-9 kg for obese women. Without stratifying by pre-pregnancy BMI, it's difficult to fully contextualize our findings, but the mean gain appears to be at the lower end of recommendations for normal-weight women.

This relatively modest gestational weight gain may reflect regional or cultural factors influencing dietary practices during pregnancy, socioeconomic constraints affecting food availability, or potentially inadequate nutritional counseling during antenatal care. It might also relate to the high prevalence of anemia in our cohort, as iron deficiency can affect appetite and energy levels, potentially limiting weight gain.

Several comparative studies have analyzed gestational weight gain patterns and their implications for pregnancy outcomes. Ma Z and colleagues (2024) divided GWG trajectories into four groups and found that different trajectories had varying impacts on pregnancy outcomes, with slow GWG increasing the risk of LGA compared to extremely slow GWG, while moderate and rapid GWG trajectories reduced risks of SGA and LBW but increased risks of macrosomia and LGA [52]. Our study did not classify weight gain trajectories in this manner, but our finding of lower weight gain in mothers who delivered SGA babies aligns with their observation that insufficient weight gain increases SGA risk.

Baxi and colleagues (2021) observed a negative correlation between GWG and pre-pregnancy BMI, indicating that as pre-pregnancy BMI increased, GWG decreased [54]. Our study did not specifically analyze this relationship, but our finding of a positive correlation between BMI and weight gain ($r = 0.332$, $p < 0.001$) seems to contradict their observation. This discrepancy may reflect differences in study populations, BMI distributions, or methodological approaches.

Huang et al. (2016) reported that excessive weight gain occurred in 57.9% of their

participants, while 12.5% experienced insufficient weight gain [57]. Without categorizing our weight gain data according to IOM recommendations, we cannot directly compare the prevalence of inadequate or excessive gain, but our lower mean gain suggests that inadequate weight gain might be more common in our population.

The correlation analysis in our study revealed significant positive associations between weight gain and maternal age ($r = 0.337$, $p < 0.001$), BMI ($r = 0.332$, $p < 0.001$), gestational age ($r = 0.196$, $p < 0.001$), and birth weight ($r = 0.231$, $p < 0.001$). These correlations suggest that older mothers, those with higher BMI, those with longer gestations, and those delivering heavier babies tend to gain more weight during pregnancy. The absence of correlation with the number of ANC visits suggests that antenatal care frequency may not directly influence weight gain patterns in our cohort.

**Association Between Gestational Weight Gain and Mode of Delivery**

Our study found that mean weight gain was significantly lower in mothers who underwent LSCS (9.36 ± 2.38 kg) compared to those with vaginal deliveries (10.35 ± 2.12 kg), with a p-value of 0.0001. This finding suggests that lower gestational weight gain is associated with a higher likelihood of cesarean delivery in our population.

This observation differs from some existing literature, which often associates excessive rather than inadequate weight gain with increased cesarean delivery risk. For instance, Li and colleagues (2013) found that excessive GWG was linked to higher risks of cesarean delivery [64], while our findings suggest the opposite relationship.

Several factors might explain this apparent discrepancy. First, the association between weight gain and delivery mode may be confounded by underlying conditions that both limit weight gain and increase cesarean delivery risk, such as hypertensive disorders or intrauterine growth restriction. Second, our study's relatively lower overall weight gain (mean 10.32 kg) compared to IOM recommendations might mean that even our "higher" weight gain group falls within normal or even inadequate ranges by international standards, potentially altering the relationship with delivery outcomes.

Vinturache and colleagues (2014) focused more on pre-pregnancy BMI than gestational weight gain, finding that overweight and obese women were more likely to have labor induced and, among induced labors, obesity significantly increased the risk of delivery by C-section [61]. While we didn't analyze the interaction between pre-pregnancy BMI and weight gain in relation to delivery mode, such interactions could help explain our observed association.

Meenakshi and colleagues (2012) found that overweight and obese women experienced higher rates of cesarean section compared to women with normal BMI [55]. Our study's finding of a negative association between weight gain and cesarean delivery might reflect a different mechanism, possibly related to the relatively lower overall weight gain in our population.

Baxi and colleagues (2021) observed that the incidence of cesarean delivery was higher in nuclear families (56.92%) compared to joint families (46.92%) [54], suggesting that social and familial factors might influence delivery outcomes. In our cohort, 60.2% reported living in nuclear families, which might have influenced the cesarean delivery patterns we observed, though we did not specifically analyze this relationship.

The inverse relationship between gestational weight gain and cesarean delivery in our study warrants further investigation, particularly to understand whether this pattern is specific to our population or reflects broader relationships between inadequate weight gain and delivery complications. Future research should consider stratifying by pre-pregnancy BMI and analyzing the potentially confounding effects of maternal comorbidities on both weight gain and delivery mode.

**Association Between Gestational Weight Gain and Preterm Delivery**

Our analysis revealed that mothers with preterm delivery had significantly lower mean weight gain (9.37 ± 2.49 kg) than those with term delivery (10.40 ± 2.06 kg), with a statistically significant p-value of 0.0001. This finding suggests that inadequate gestational weight gain may be a risk factor for preterm birth in our population.

This association aligns with several previous studies. Sharma and colleagues (2016)

found a U-shaped relationship between GWG rate and the odds of preterm delivery (PTD), with increased odds observed in both the lowest and highest quartiles of GWG rate [60]. While we didn't analyze weight gain as quartiles, our observation of lower overall gain in preterm deliveries is consistent with the increased preterm risk they observed with low GWG rate.

Similarly, Huang et al. (2016) observed that insufficient weight gain was associated with preterm birth in overweight/obese women [59]. Though we didn't stratify by pre-pregnancy BMI, our general finding of lower weight gain in preterm cases aligns with this observation.

Pigatti Silva and colleagues (2019) reported that insufficient GWG was linked to a higher prevalence of spontaneous PTB and preterm premature rupture of membranes [56]. Again, while we didn't categorize weight gain as insufficient or excessive according to IOM guidelines, our finding of lower mean gain in preterm cases supports their conclusion about insufficient gain and preterm risk.

However, some studies present more nuanced findings. Li and colleagues (2013) found that inadequate GWG increased the risks of preterm delivery compared to adequate GWG [64], which aligns with our results. Conversely, they reported that excessive GWG was linked to lower risks of preterm delivery, a relationship we couldn't assess without categorizing weight gain relative to recommendations.

Faucher and colleagues (2016) found that in obese women, gestational weight gain above IOM recommendations increased the risk of indicated preterm birth [58]. This contrasts with our finding of lower weight gain associated with preterm birth, though the difference might be explained by their focus specifically on obese women and indicated (rather than spontaneous) preterm birth.

The complex relationship between gestational weight gain and preterm delivery is further illustrated by Cnattingius and colleagues (2013), who focused primarily on pre-pregnancy BMI rather than gestational weight gain. They found that risks of extremely, very, and moderately preterm deliveries increased with BMI [63]. While this doesn't directly address weight gain during pregnancy, it highlights how pre-pregnancy nutritional status influences preterm risk.

The mean gestational age in our study was 37.64 ± 2.34 weeks, with 21.8% of deliveries occurring preterm. This relatively high preterm rate might reflect selection bias in our hospital-based sample or could indicate genuinely high preterm rates in our population. The lower weight gain observed in our preterm cases might represent both a cause and consequence of preterm delivery—insufficient nutrition might contribute to preterm birth, but shorter gestations also provide less time for weight accumulation.

Our findings add to the growing evidence that inadequate gestational weight gain increases preterm delivery risk and suggests that interventions to promote appropriate weight gain during pregnancy could potentially reduce preterm birth rates in our population.

**Association Between Gestational Weight Gain and Fetal Growth**

Our study found that weight gain was significantly lower among mothers who delivered small-for-gestational-age (SGA) babies (9.10 ± 1.52 kg) compared to those who delivered appropriate-for-gestational-age (AGA) babies (10.29 ± 2.20 kg), with p = 0.0001. This finding suggests a direct relationship between maternal gestational weight gain and fetal growth.

This association aligns well with findings from several comparative studies. Ma Z and colleagues (2024) reported that women in the moderate and rapid GWG trajectory groups had lower risks of SGA and low birth weight (LBW) compared to those with extremely slow GWG [52]. Although we didn't classify weight gain trajectories in the same manner, our observation of lower weight gain in mothers of SGA infants supports their conclusion that inadequate weight gain increases SGA risk.

Abdulmalik and colleagues (2019) found that the proportion of large-for-gestational-age infants increased with greater gestational weight gain [57], which is the converse of our finding but reflects the same underlying relationship between maternal weight gain and fetal growth.

Li and colleagues (2013) reported that inadequate GWG increased the risks of SGA compared to adequate GWG [64], which directly parallels our finding. They also

noted that excessive GWG decreased SGA risk, further supporting the positive relationship between maternal weight gain and fetal growth.

Lefizelier et al. (2021) focused primarily on pre-pregnancy BMI rather than gestational weight gain, finding that prepregnancy underweight BMI was associated with an increased risk of SGA neonates [55]. While this doesn't directly address weight gain during pregnancy, it highlights how pre-pregnancy nutritional status influences fetal growth outcomes.

The correlation analysis in our study revealed a significant positive association between weight gain and birth weight ($r = 0.231$, $p < 0.001$), further confirming the direct relationship between maternal weight gain and fetal growth. This correlation provides a continuous measure of the association, complementing our categorical analysis of SGA versus AGA outcomes.

The biological mechanisms underlying this association likely involve nutrient availability for fetal growth, placental development and function, and maternal metabolic adaptations during pregnancy. Insufficient maternal weight gain may reflect inadequate nutritional intake or utilization, compromising the resources available for optimal fetal growth.

Our findings highlight the importance of promoting appropriate gestational weight gain to reduce the risk of SGA births, which are associated with higher perinatal morbidity and mortality as well as long-term health consequences. Nutritional counseling and interventions during antenatal care should emphasize not only the risks of excessive weight gain but also the potential consequences of inadequate gain, particularly for fetal growth and development.

**Impact of Gestational Weight Gain on Neonatal Outcomes**

Our study found that mean weight gain in mothers whose neonates required NICU stay was slightly lower ($9.96 \pm 2.15$ kg) compared to those who did not ($10.34 \pm 2.17$ kg), with a statistically significant p-value of 0.0001, though the absolute difference was relatively small. This suggests that inadequate gestational weight gain may be associated with poorer neonatal outcomes requiring intensive care.

NICU admission was required for 20.3% of neonates in our cohort, which is a substantial proportion and may reflect the high-risk nature of our hospital-based sample or the presence of multiple risk factors in our population. The APGAR score distribution showed that 53.7% of neonates had moderately depressed scores, 39.3% had excellent scores, and 7.1% were severely depressed, indicating a considerable burden of immediate postnatal adaptation challenges.

The association between lower maternal weight gain and increased NICU admission risk aligns with findings from several comparative studies. Meenakshi and colleagues (2012) found that overweight and obese women experienced higher rates of neonatal intensive care unit admission compared to women with normal BMI [65], though their focus was on pre-pregnancy BMI rather than gestational weight gain.

Our finding may reflect the relationships we observed between lower weight gain and both preterm birth and SGA status, both of which are leading causes of NICU admission. The pathways linking inadequate gestational weight gain to adverse neonatal outcomes likely involve compromised fetal growth, increased preterm birth risk, and potentially other mechanisms related to placental function and maternal-fetal nutrient transfer.

Interestingly, we did not find a significant correlation between weight gain and APGAR scores, suggesting that while weight gain may influence some aspects of neonatal health, it might not directly affect immediate postnatal adaptation as measured by the APGAR scoring system. This contrasts somewhat with Meenakshi and colleagues (2012), who found higher rates of Apgar score < 7 at 5 min in overweight and obese women [65], though again their focus was on pre-pregnancy BMI rather than gestational weight gain.

The gender distribution of neonates in our study was 57.6% male and 42.4% female, which shows a slight male predominance. We did not specifically analyze whether the relationship between maternal weight gain and neonatal outcomes differed by infant gender, though this could be an interesting direction for future research.

The complex relationship between maternal weight gain and neonatal outcomes highlights the importance of optimizing weight gain during pregnancy to improve

both maternal and neonatal health. Our findings suggest that interventions to promote appropriate gestational weight gain might reduce NICU admission rates and improve overall neonatal outcomes in our population.

**Relationship Between Pre-pregnancy BMI, Gestational Weight Gain, and Pregnancy Outcomes**

While our study did not explicitly analyze pre-pregnancy BMI in relation to outcomes, we did observe a significant positive correlation between BMI and gestational weight gain ($r = 0.332$, $p < 0.001$). This finding suggests that women with higher BMI tended to gain more weight during pregnancy in our cohort.

This observation contrasts with Baxi and colleagues (2021), who reported a negative correlation between GWG and pre-pregnancy BMI, indicating that as pre-pregnancy BMI increased, GWG decreased [54]. This discrepancy might reflect differences in study populations, pre-pregnancy BMI distributions, or cultural factors influencing weight gain during pregnancy.

Several comparative studies have extensively investigated the interplay between pre-pregnancy BMI, gestational weight gain, and pregnancy outcomes. Ma Z and colleagues (2024) found that women with pre-pregnancy overweight/obesity had significantly higher adjusted odds ratios for risks of large for gestational age (LGA), macrosomia, gestational diabetes mellitus (GDM), and hypertensive disorders of pregnancy (HDP) compared to those with normal weight [52]. Conversely, they observed that underweight women had higher risks of small for gestational age (SGA) and low birth weight (LBW).

Li and colleagues (2013) reported that women with both prepregnancy obesity and excessive GWG faced significantly higher risks of various adverse outcomes compared to women with normal prepregnancy BMI and adequate GWG [64]. This highlights the importance of considering both pre-pregnancy nutritional status and weight gain during pregnancy when assessing risk.

Pedersen DC and colleagues (2022) took a life-course approach, finding that a woman's birth weight and childhood height were inversely associated with the risk of

preterm delivery [53]. This perspective emphasizes how nutritional and growth factors throughout a woman's life, not just during pregnancy, influence pregnancy outcomes.

Kosa and colleagues (2011) proposed that current BMI categories may not effectively identify women at higher risk for preterm delivery, suggesting that the relationship between body mass and pregnancy outcomes might be more nuanced than categorical approaches can capture [66]. This aligns with more recent studies like Ma Z and colleagues (2024), who examined weight gain trajectories rather than just total gain [52].

Torloni and colleagues (2009) found that the association between maternal BMI and preterm birth varied by BMI category and preterm birth subtype, with preobese and obese I women showing reduced risk for spontaneous preterm birth but increased risk for moderate preterm birth [68]. This complexity highlights the need for nuanced approaches to understanding and managing weight-related risks during pregnancy.

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# *CONCLUSION*
# *&*
# *RECOMMENDATIONS*

# CONCLUSION & RECOMMENDATIONS

## Conclusion

This study demonstrates a significant association between gestational weight gain and multiple adverse neonatal outcomes in our population. Lower gestational weight gain was consistently associated with increased risks of cesarean delivery, preterm birth, small-for-gestational-age infants, and NICU admission. These findings suggest that inadequate weight gain during pregnancy may constitute a significant risk factor for both maternal and neonatal complications. The mean gestational weight gain in our cohort (10.32 ± 2.15 kg) appears relatively modest compared to international recommendations, suggesting that inadequate rather than excessive weight gain may be a more prevalent concern in our population. This contrasts with the focus on excessive weight gain in much contemporary literature from Western settings, highlighting the importance of context-specific research and recommendations.

The significant positive correlations between weight gain and maternal age, BMI, gestational age, and birth weight provide important insights into factors associated with weight gain patterns during pregnancy. These relationships may help identify women at risk of inadequate weight gain who might benefit from enhanced nutritional counseling and support during antenatal care.

Our findings emphasize that monitoring and promoting appropriate gestational weight gain should be key components of prenatal care to optimize maternal and neonatal outcomes. While much attention has been focused on the risks of excessive gestational weight gain, our study highlights that inadequate gain may pose equally significant risks, particularly in populations where nutritional deficiencies are common.

## Strengths

- Substantial sample size: The study included 354 pregnant women, providing adequate statistical power for the analyses and enhancing the reliability of findings.

- Comprehensive data collection: Detailed information was gathered on multiple aspects of pregnancy, including maternal characteristics, obstetric history, antenatal care practices, and various pregnancy outcomes.

- Trimester-specific weight gain assessment: Weight gain was measured across all three trimesters, allowing for a more nuanced understanding of weight gain patterns throughout pregnancy.

- Multiple outcome measures: The study examined various important pregnancy outcomes including delivery mode, preterm birth, fetal growth, and neonatal indicators (NICU admission, APGAR scores), providing a comprehensive assessment.

**Limitations**

- Hospital-based sample: The recruitment of participants from a hospital setting may introduce selection bias and limit generalizability to the broader pregnant population.

- Absence of dietary and physical activity data: The study did not collect detailed information on maternal diet or physical activity, which are important determinants of gestational weight gain.

- Cross-sectional design: The observational nature of the study limits causal inference regarding the relationships between weight gain and outcomes.

- Limited long-term follow-up: The study did not assess long-term maternal or infant outcomes beyond the immediate postpartum period.

**Recommendations**

- Implement enhanced monitoring of gestational weight gain as a standard component of antenatal care, with particular attention to women showing patterns of inadequate gain.

- Develop targeted nutritional counseling protocols addressing both caloric sufficiency and micronutrient adequacy, especially for women with risk factors for inadequate weight gain.

- Strengthen screening and management of maternal anemia during pregnancy, given its high prevalence and potential relationship with inadequate weight gain.

- Establish trimester-specific weight gain targets that are contextualized to the local population, rather than solely relying on international guidelines developed in different settings.

- Provide additional support and monitoring for women with lower gestational weight gain, including more frequent antenatal visits and enhanced fetal surveillance.

- Integrate weight gain assessment into risk stratification protocols for identifying pregnancies at increased risk of preterm birth, growth restriction, and other adverse outcomes.

- Develop interdisciplinary approaches involving obstetricians, nutritionists, and primary healthcare providers to comprehensively address factors influencing gestational weight gain.

- Implement postpartum follow-up programs that include nutritional counseling to optimize maternal health before subsequent pregnancies.

- Conduct prospective studies that include pre-pregnancy weight measurements to allow for BMI-specific weight gain recommendations and analysis.

# *SUMMARY*

# SUMMARY

**Summary;**

- This study examined the association between gestational weight gain and adverse neonatal outcomes among 354 pregnant women. The participants had a mean age of 23.35 ± 3.79 years, with most (48.0%) falling in the 21-25 years age group. The majority were homemakers (69.5%) with varying education levels: 34.7% had secondary education, 33.6% had higher education, and 31.6% had primary schooling only. Socioeconomically, 30.5% belonged to the upper middle class, 28.8% to the lower middle class, 27.7% to the upper lower class, and 13.0% to the upper class.

- Obstetric characteristics revealed that 60.2% were primigravida, while 39.8% were multigravida. Most participants (80.2%) were registered for regular antenatal care. Anemia was highly prevalent, with 62.7% having mild anemia, 29.1% severe anemia, and 8.2% moderate anemia. Other maternal conditions included PCOS (41.2%), hypothyroidism (35.0%), and history of blood transfusion (28.8%).

- The mean gestational weight gain was 10.32 ± 2.15 kg, with trimester-specific gains averaging 1.26 kg in the first trimester, 3.71 kg in the second trimester, and 5.35 kg in the third trimester. The mean gestational age at delivery was 37.64 ± 2.34 weeks, with 21.8% delivering preterm.

- Significant associations were found between gestational weight gain and several outcomes. Weight gain was significantly lower in mothers who underwent cesarean delivery (9.36 ± 2.38 kg vs. 10.35 ± 2.12 kg for vaginal delivery, p=0.0001), in those with preterm delivery (9.37 ± 2.49 kg vs. 10.40 ± 2.06 kg for term delivery, p=0.0001), in those who delivered small-for-gestational-age (SGA) babies (9.10 ± 1.52 kg vs. 10.29 ± 2.20 kg for appropriate-for-gestational-age babies, p=0.0001), and in those whose neonates required NICU stay (9.96 ± 2.15 kg vs. 10.34 ± 2.17 kg, p=0.0001).

- Correlation analysis revealed significant positive associations between gestational weight gain and maternal age (r=0.337), BMI (r=0.332), gestational age (r=0.196), and birth weight (r=0.231), all with $p<0.001$.

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# *ANNEXURES*

# ANNEXURE I

# PROFOMA

**CASE REPORT SHEET**

Thesis Topic: Gestational Weight Gain and Pregnancy Outcomes

**PATIENT DETAILS**

Name: B/O _____Name of Mother: _____

Ocuupation of mother _____Socioeconomic status _____

Weight _____.Height _____.

Bmi _____

Date of Birth and Time of Birth: _____ Place of Birth: _____

Date and Time data Collection: _____

Gender: 1. M / 2. F

Address: _____

**MATERNAL HISTORY**

History of: HTN / DM / CHD / Hypercholesterolemia/ Thyroid : 1. Yes / 2. No

Birth spacing - 1. Yes / 2. No

Parity: 1. Primi 2. G2 3. G3 4. ≥G4

History of abortion – 1. Yes / 2. No

Patient is - Booked / unbooked

ANC Check-up: 1. Regular 2. Irregular 3. Not taken ( regular 4or more , irregular <4 )

ANC H/O

LMP: _____ EDD: _____

Weight gain trimester wise

Trimester 1

Trimester 2

Trimester 3

Supplementation with iron / folic acid / calcium - 1. Yes / 2. No

**PROBLEMS DURING PREGNANCY (PDP)**

1. No Problems 2. Anaemia 3. PIH 4. Pre-eclampsia 5. Eclampsia

6. APH 7. UTI 8. RHD / CHD 9. Fever 10. Others:

_____

**NATAL HISTORY**

Mode of Delivery (MOD): 1. Normal vaginal delivery 2. C-section 3. Others

Birth Asphyxia: 1. Present 2. Absent

Apgar Score: 1 min: _____ 5 min: _____

Intervention after Delivery (IAD):

1. Not done 2. Stimulation and suctioning 3. Bag & mask ventilation 4. ET tube ventilation

**GENERAL PHYSICAL EXAMINATION**

1. Normal 2. Abnormal

**ANTHROPOMETRY**

Weight: _____ Kg (SGA / AGA / LGA)

**VITAL SIGNS**

Heart Rate: _____ / min

Respiratory Rate: _____ / min

Temperature: _____

Capillary Refilling Time: <3 sec / >3 sec

**SYSTEMIC EXAMINATION**

CVS: 1. Normal 2. Abnormal

RS: 1. Normal 2. Abnormal

PA: 1. Normal 2. Abnormal

CNS: 1. Normal 2. Abnormal

Signature of Investigator: _____

Date: _____

# ANNEXURE II

## PATIENT INFORMATION SHEET

Patient's name:

Study Subject No.:

Background to the study: I, Dr.Kanwardeep Singh, MD Pediatrics post graduate, am conducting a study "Gestational Weight gain and pregnancy outcomes.

". To determine association between gestational weight gain and adverse neonatal outcomes

Enrolment in the study: Participation in the study is on a voluntary basis. The subject will not be given any treatments as this is a cross sectional study. Your ward may volunteer to participate in this study after you (the parent) have signed the written informed consent form. Once enrolled, your details will be filled in the proforma. These details will be used while compiling the result. You may leave the study at any point of time if you so desire. If you choose to opt out of the study during any point of time, your details will not be used. This is an absolutely safe study. There is no risk involved per se.

# ANNEXURE III

# INFORMED CONSENT

Subject Identification No. for study:

Title of the Study: ***Gestational Weight gain and pregnancy outcomes***

Name of the Principal Investigator: Dr. Kanwardeep Singh

I have received the information sheet on the above study and have read and / or understood the written information. I have been given the chance to discuss the study and ask questions. I consent for my ward to take part in the study and I am aware that this participation is voluntary. I understand that I may withdraw at any time during the study. I understand that the information collected about my ward from participation in this research and sections of any of my medical notes may be looked at by responsible persons (ethics committee members / regulatory authorities). I give access to these individuals to have access to those records.

I understand I will receive a copy of the patient information sheet and the informed consent form.

_____ _____

Name and signature of patient / caretaker Date

# सूचित सहमति पत्र

इस परीक्षण के लिए विषय पहचान संख्या:

परियोजना का शीर्षक: ***Gestational Weight gain and pregnancy outcomes***

र्भकालीन वजन बढ़ना और गर्भावस्था के परिणाम

प्रधान अन्वेषक का नाम : Dr. Kanwardeep Singh

मुझे अध्ययन पर सूचना पत्र प्राप्त हुआ है और मैंने लिखित जानकारी को पढ़लिया है / समझलिया है। मुझे अध्ययन पर चर्चा और सवाल पूछने का मौका दिया गया है।

मुझे जानकारी है कि मेरी भागीदारी स्वैच्छिक है, और मुझे अध्ययन में भाग लेने के लिए सहमति है।

मुझे जानकारी है मैं सहमति किसी भी समय वापस ले सकता हूँ। मुझे जानकारी है कि मेरी भागीदारी से मेरे बारे में एकत्रित की गई जानकारी और मेरे चिकित्सा नोटों के वर्गों को जिम्मेदार व्यक्तियों द्वारा देखा जा सकता है (नैतिकता समिति के सदस्यों / नियामक अधिकारियों) ।मैं अपने रिकॉर्ड का उपयोग करने के लिए इन व्यक्तियों को सहमति देता हूँ।

मुझे जानकारी है कि मुझे रोगी सूचना पत्रक की और सहमति पत्रकी एक प्रतिदी जाएगी।

हस्ताक्षर व नाम दिनांक

# ANTI PLAGIARISM CERTIFICATE

## Kanwardeep Singh

## GESTATIONAL WEIGHT GAIN AND PREGNANCY OUTCOMES.docx

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F. No. SU/R/2023/2489[34] Dated: 26.09.2023

Subject: Grant of Ethical Clearance for **Thesis Protocol** Topic **"Gestational Weight gain and pregnancy outcomes"**, submitted by **Dr. KANWARDEEP SINGH,** MD/MS student of Batch 2022-2023, Department of **PAEDIATRICS**.

*****

With reference to his/her request for grant of Ethical Clearance for the Thesis Protocol entitled **"Gestational Weight gain and pregnancy outcomes"**, **Dr. KANWARDEEP SINGH** is informed that the **Thesis Protocol** submitted by him/her was considered by the **Screening Committee** of the Santosh Medical College & Hospital in its meetings held on 17.07.2023 to 28.07.2023. The recommendations of the **Screening Committee** were considered in detail by the **Institutional Ethics Committee** in its meeting held on **23.09.2023** and the same was **approved** by the **Ethics Committee**.

He /She is informed accordingly for further necessary action.

[Dr. NARESH SHARMA]
REGISTRAR

SANTOSH "DEEMED TO BE UNIVERSITY" REGISTRAR GHAZIABAD, NCR DELHI

**Dr. KANWARDEEP SINGH**
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**Copy to:**

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16th February 2025

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Vice Chancellor

# *MASTER CHART*

# Master chart

| S.N | MOTHERS AGE | Pre-pregnancy wr | HT | BMI | 1st T Wt gain | 2nd T Wt gain | 3rd T Wt gain | Wt gain | Education | Occupation | Family | SES | Gravida | abortion | Birth spacing | Booked | ANC visit | Anemia type | ANEMIA | APH | PPH | ANOMALY SCAN | H/O PCOS | Hypothyroidism | HYPERTENSION | GDM | Addiction | Stress | H/O BT | Iron | Calcium | Pre-conceptional FA | Post-conceptional FA | GA(weeks) | BW(kgs) | AGA/SGA | Gender | Mode of delivery | NICU Stay | APGAR at 1 min | APGAR at 5 min |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22 | 47 | 1.56 | 19.31 | 1 | 4 | 4 | 9 | Higher | Private Job | Joint | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | Y | Y | Y | N | Y | 32 | 2.1 | AGA | F | LSCS | Y | 7 | 8 |
| 2 | 21 | 59 | 1.63 | 22.21 | 2 | 4 | 6 | 12 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 9 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.6 | SGA | F | VD | N | 8 | 9 |
| 3 | 20 | 58 | 1.62 | 22.1 | 1.5 | 5.5 | 4 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 6 | Moderate | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | Y | 7 | 8 |
| 4 | 21 | 72 | 1.5 | 32 | 1 | 2 | 3 | 6 | Primary | Home maker | Nuclear | Lower middle | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 36 | 2.6 | AGA | M | VD | Y | 7 | 9 |
| 5 | 19 | 70 | 1.54 | 29.52 | 2 | 2 | 4 | 8 | Primary | Home maker | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 35 | 2.9 | AGA | M | VD | Y | 7 | 9 |
| 6 | 24 | 59 | 1.59 | 23.34 | 1 | 3 | 5 | 9 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 7 | Moderate | Treated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.7 | AGA | F | VD | N | 8 | 9 |
| 7 | 30 | 64 | 1.47 | 29.62 | 2 | 4 | 6 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | 39 | 2.7 | AGA | F | VD | Y | 7 | 8 |
| 8 | 21 | 58 | 1.66 | 21.05 | 1 | 3 | 4 | 8 | Secondary | Private Job | Joint | Upper Middle | 2 | N | <24 months | Y | 9 | Severe | Treated | Y | N | Normal | Y | N | Gestational | N | N | N | N | Y | Y | N | Y | 39 | 2.8 | AGA | M | VD | Y | 9 | 9 |
| 9 | 27 | 69 | 1.5 | 30.67 | 2 | 6 | 4 | 10 | Higher | Teacher | Joint | Upper Lower | 2 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | Depression | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 8 | 9 |
| 10 | 22 | 52 | 1.63 | 19.57 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | Y | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 11 | 24 | 69 | 1.62 | 26.29 | 3 | 5 | 3 | 11 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 9 | Mild | Treated | N | N | Normal | Y | N | N | N | N | Physical stress | N | Y | Y | N | Y | 34 | 1.9 | AGA | F | LSCS | N | 7 | 7 |
| 12 | 19 | 65 | 1.46 | 30.49 | 1 | 2 | 4 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 10 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 9 | 9 |
| 13 | 20 | 64 | 1.47 | 29.62 | 1.5 | 3 | 5.5 | 10 | Higher | Home maker | Nuclear | Lower middle | 2 | N | <24 months | Y | 5 | Severe | Treated | N | N | Normal | Y | Y | Pre-eclampsia | N | N | N | N | Y | N | N | Y | 35 | 2.1 | AGA | M | VD | Y | 9 | 9 |
| 14 | 32 | 65 | 1.58 | 26.04 | 3 | 6 | 5 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 9 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.3 | AGA | M | VD | N | 9 | 9 |
| 15 | 24 | 47 | 1.57 | 19.07 | 2 | 4 | 5 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | N | 1 | Mild | Untreated | N | N | Normal | N | N | N | Y | N | N | N | Y | Y | N | Y | 36 | 2.9 | AGA | M | VD | Y | 7 | 8 |
| 16 | 26 | 65 | 1.59 | 25.71 | 1 | 2 | 4 | 6 | Secondary | Teacher | Nuclear | Upper Middle | 1 | Y | | N | 2 | Mild | Treated | N | Y | Normal | Y | N | N | N | N | Depression | N | Y | Y | Y | N | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 17 | 22 | 58 | 1.65 | 21.3 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 37 | 2.6 | AGA | M | VD | N | 9 | 9 |
| 18 | 18 | 49 | 1.64 | 18.22 | 1.5 | 2.5 | 3 | 7 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 19 | 24 | 51 | 1.62 | 19.43 | 1 | 1 | 4 | 6 | Primary | Daily wage labourer | Nuclear | Lower middle | 2 | N | > 24 months | N | 2 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | Y | N | N | Y | 37 | 3 | AGA | M | VD | N | 8 | 8 |
| 20 | 19 | 58 | 1.57 | 23.53 | 2 | 4 | 8 | 14 | Secondary | Private Job | Joint | Upper | 1 | N | | N | 4 | Severe | Treated | N | N | Normal | N | Y | N | Y | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 9 | 9 |
| 21 | 29 | 60 | 1.54 | 25.3 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 9 | 9 |
| 22 | 22 | 57 | 1.56 | 23.42 | 2 | 3 | 4 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | Anxiety | Y | Y | Y | N | Y | 30 | 1.8 | SGA | F | LSCS | N | 8 | 8 |
| 23 | 31 | 46 | 1.59 | 18.2 | 1 | 1 | 2 | 4 | Primary | Home maker | Nuclear | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 34 | 1.9 | AGA | F | LSCS | N | 8 | 8 |
| 24 | 25 | 54 | 1.55 | 22.48 | 2 | 4 | 3 | 9 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Severe | Untreated | N | N | Normal | N | Y | Gestational | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 25 | 26 | 53 | 1.61 | 20.45 | 2 | 5 | 7 | 14 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Untreated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 26 | 21 | 47 | 1.46 | 22.05 | 1 | 2 | 1 | 4 | Secondary | Daily wage labourer | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | Y | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 27 | 24 | 52 | 1.62 | 19.81 | 2 | 5 | 5 | 12 | Higher | Teacher | Joint | Upper | 2 | N | > 24 months | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 28 | 23 | 55 | 1.55 | 22.89 | 0 | 3 | 3 | 6 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 6 | Moderate | Treated | Y | N | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 33 | 1.9 | AGA | F | LSCS | N | 9 | 9 |
| 29 | 20 | 50 | 1.56 | 20.55 | 2 | 5 | 6 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 30 | 19 | 48 | 1.67 | 17.21 | 1 | 3 | 5 | 9 | Higher | Private Job | Joint | Lower middle | 1 | N | | Y | 8 | Severe | Treated | N | N | Normal | N | N | N | Y | N | N | Y | Y | Y | Y | Y | 39 | 3.8 | AGA | F | VD | N | 9 | 9 |
| 31 | 28 | 80 | 1.69 | 28.01 | 0 | 4 | 6 | 10 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 3.5 | AGA | F | VD | N | 8 | 8 |
| 32 | 20 | 79 | 1.54 | 33.31 | 2 | 4 | 5 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | Y | 8 | 8 |
| 33 | 20 | 50 | 1.66 | 18.14 | 1 | 3 | 5 | 9 | Secondary | Private Job | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 9 |
| 34 | 19 | 51 | 1.76 | 16.46 | 0 | 4 | 6 | 10 | Primary | Home maker | Joint | Upper Lower | 1 | N | | N | 3 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | M | VD | N | 9 | 9 |
| 35 | 24 | 61 | 1.59 | 24.13 | 2 | 4 | 7 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.8 | AGA | F | VD | Y | 8 | 8 |
| 36 | 24 | 69 | 1.56 | 28.35 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 37 | 21 | 82 | 1.66 | 29.76 | 0 | 3 | 5 | 8 | Secondary | Engineer | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 38 | 30 | 42 | 1.58 | 16.82 | 1 | 4 | 5 | 10 | Higher | Private Job | Joint | Upper Lower | 1 | Y | | Y | 6 | Severe | Treated | N | Y | Normal | N | Y | Gestational | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 39 | 22 | 52 | 1.6 | 20.31 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | Y | 8 | 8 |
| 40 | 24 | 68 | 1.66 | 24.68 | 1 | 2 | 5 | 8 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 32 | 2.3 | AGA | F | LSCS | Y | 8 | 8 |
| 41 | 19 | 65 | 1.59 | 25.71 | 0 | 3 | 4 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | Y | 8 | 9 |
| 42 | 20 | 64 | 1.54 | 26.99 | 2 | 3 | 3 | 8 | Higher | Home maker | Nuclear | Lower middle | 2 | N | <24 months | Y | 8 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | N | Y | 32 | 2.7 | AGA | M | LSCS | Y | 8 | 8 |
| 43 | 32 | 71 | 1.58 | 28.44 | 3 | 4 | 6 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | N | Y | Y | N | Y | 36 | 3.3 | AGA | M | VD | Y | 9 | 9 |
| 44 | 24 | 62 | 1.57 | 25.15 | 2 | 3 | 6 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | N | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 45 | 26 | 65 | 1.59 | 25.71 | 1 | 5 | 4 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | Y | | N | 6 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 46 | 22 | 64 | 1.56 | 26.3 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 3.4 | AGA | M | VD | N | 8 | 8 |
| 47 | 20 | 44 | 1.64 | 16.36 | 1 | 3 | 7 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 48 | 24 | 74 | 1.58 | 29.64 | 2 | 5 | 5 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Medentary | Treated | N | Y | Normal | N | Y | N | N | N | N | N | Y | N | N | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 49 | 19 | 58 | 1.57 | 23.53 | 1 | 5 | 6 | 12 | Primary | Home maker | Joint | Upper | 1 | N | | Y | 4 | Severe | Treated | Y | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 50 | 29 | 72 | 1.62 | 27.43 | 1 | 4 | 7 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 51 | 22 | 57 | 1.56 | 23.42 | 0 | 3 | 5 | 8 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 30 | 1.4 | SGA | F | LSCS | Y | 9 | 9 |
| 52 | 21 | 53 | 1.45 | 25.21 | 2 | 5 | 5 | 12 | Primary | Daily wage labourer | Nuclear | Upper Lower | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.6 | SGA | F | VD | N | 8 | 8 |
| 53 | 20 | 58 | 1.62 | 22.1 | 1 | 5 | 5 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 54 | 23 | 48 | 1.66 | 17.42 | 2 | 3 | 4 | 9 | Secondary | Home maker | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 55 | 19 | 51 | 1.62 | 19.43 | 1 | 5 | 4 | 10 | Primary | Daily wage labourer | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.5 | AGA | M | VD | N | 9 | 9 |
| 56 | 24 | 61 | 1.59 | 24.13 | 2 | 6 | 5 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.7 | AGA | F | VD | N | 8 | 8 |
| 57 | 24 | 50 | 1.62 | 19.05 | 1 | 4 | 7 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | Y | Normal | Y | Y | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | Y | 8 | 8 |
| 58 | 21 | 58 | 1.66 | 21.05 | 0 | 4 | 4 | 8 | Primary | Daily wage labourer | Joint | Lower middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 35 | 2.1 | AGA | M | VD | Y | 8 | 8 |
| 59 | 30 | 67 | 1.56 | 27.53 | 1 | 4 | 5 | 10 | Higher | Daily wage labourer | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | N | 38 | 3.1 | AGA | M | VD | N | 8 | 8 |
| 60 | 22 | 52 | 1.64 | 19.33 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 9 | 9 |
| 61 | 24 | 57 | 1.62 | 21.72 | 2 | 6 | 5 | 13 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 34 | 2.8 | AGA | F | LSCS | Y | 9 | 9 |
| 62 | 19 | 65 | 1.67 | 23.31 | 1 | 3 | 3 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | N | 38 | 2.9 | AGA | F | VD | N | 9 | 9 |
| 63 | 20 | 55 | 1.5 | 24.44 | 2 | 2 | 5 | 9 | Higher | Daily wage labourer | Nuclear | Lower middle | 2 | N | <24 months | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | N | N | N | 34 | 2.7 | AGA | M | LSCS | Y | 8 | 8 |
| 64 | 32 | 51 | 1.58 | 20.43 | 1 | 5 | 7 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | Gestational | N | N | N | Y | Y | Y | Y | Y | 39 | 3 | AGA | M | VD | N | 9 | 9 |
| 65 | 24 | 62 | 1.57 | 25.15 | 2 | 5 | 4 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 4 | Mild | Untreated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | N | N | 39 | 3.7 | AGA | M | VD | N | 8 | 8 |
| 66 | 26 | 65 | 1.59 | 25.71 | 1 | 4 | 5 | 10 | Secondary | Daily wage labourer | Nuclear | Upper Middle | 1 | Y | | N | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 67 | 22 | 69 | 1.54 | 29.09 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | Y | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 68 | 21 | 49 | 1.64 | 18.22 | 2 | 4 | 5 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 69 | 24 | 51 | 1.58 | 20.43 | 1 | 5 | 6 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | N | Y | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 70 | 19 | 47 | 1.57 | 19.07 | 0 | 6 | 6 | 12 | Primary | Government Job | Joint | Upper | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 71 | 29 | 58 | 1.62 | 22.1 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 9 | 9 |
| 72 | 22 | 50 | 1.56 | 20.55 | 2 | 2 | 5 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.5 | AGA | F | LSCS | N | 9 | 9 |
| 73 | 34 | 57 | 1.48 | 26.02 | 4 | 5 | 5 | 14 | Higher | Home maker | Nuclear | Upper Middle | 2 | N | | Y | 8 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.6 | AGA | F | LSCS | N | 8 | 8 |
| 74 | 25 | 54 | 1.55 | 22.48 | 1 | 3 | 5 | 9 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 75 | 26 | 50 | 1.5 | 22.22 | 1 | 4 | 4 | 9 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | Y | N | N | Y | 39 | 2.6 | SGA | M | VD | N | 8 | 8 |
| 76 | 21 | 64 | 1.58 | 25.64 | 2 | 3 | 5 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | Y | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 8 |
| 77 | 24 | 56 | 1.62 | 21.34 | 1 | 4 | 4 | 9 | Higher | Home maker | Joint | Upper | 2 | N | > 24 months | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 78 | 23 | 69 | 1.54 | 29.09 | 1 | 5 | 6 | 12 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 6 | Moderate | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | Y | Y | 34 | 2.4 | AGA | F | LSCS | N | 9 | 9 |
| 79 | 20 | 45 | 1.45 | 21.4 | 2 | 5 | 6 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 80 | 19 | 52 | 1.67 | 18.65 | 1 | 4 | 4 | 9 | Higher | Engineer | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | Y | N | N | Y | N | N | Y | Y | Y | N | Y | 39 | 3.8 | AGA | F | VD | N | 8 | 8 |
| 81 | 28 | 51 | 1.69 | 17.86 | 2 | 4 | 4 | 10 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.5 | AGA | F | VD | N | 9 | 9 |
| 82 | 20 | 48 | 1.56 | 19.72 | 1 | 3 | 7 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 83 | 18 | 50 | 1.66 | 18.14 | 2 | 3 | 4 | 9 | Secondary | Daily wage labourer | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 8 |
| 84 | 19 | 51 | 1.65 | 18.73 | 1 | 4 | 5 | 10 | Primary | Daily wage labourer | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | M | VD | N | 8 | 8 |
| 85 | 24 | 71 | 1.59 | 28.08 | 0 | 6 | 7 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.6 | AGA | F | VD | N | 9 | 9 |
| 86 | 24 | 64 | 1.62 | 24.39 | 1 | 3 | 8 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |

# Master chart

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 87 | 21 | 58 | 1.66 | 21.05 | 0 | 2 | 6 | 8 | Secondary | Home maker | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 88 | 30 | 47 | 1.43 | 22.98 | 1 | 4 | 5 | 10 | Higher | Government Job | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 89 | 22 | 52 | 1.47 | 24.06 | 1 | 2 | 6 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | Y | Normal | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 9 | 9 |
| 90 | 24 | 57 | 1.6 | 22.27 | 0 | 5 | 6 | 11 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 33 | 2.2 | AGA | F | LSCS | N | 8 | 8 |
| 91 | 19 | 55 | 1.54 | 23.19 | 0 | 2 | 5 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 8 | 8 |
| 92 | 20 | 64 | 1.52 | 27.7 | 2 | 3 | 5 | 10 | Higher | Engineer | Nuclear | Lower middle | 2 | N | <24 months | Y | 10 | Moderate | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | Y | Y | 34 | 2.6 | AGA | M | LSCS | N | 8 | 8 |
| 93 | 32 | 66 | 1.58 | 26.44 | 2 | 4 | 8 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 5 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 37 | 3.3 | AGA | M | VD | N | 8 | 8 |
| 94 | 24 | 62 | 1.57 | 25.15 | 1 | 3 | 7 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 4 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 95 | 26 | 70 | 1.5 | 31.11 | 0 | 4 | 6 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | Y | | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 36 | 2.7 | AGA | M | VD | N | 9 | 9 |
| 96 | 22 | 82 | 1.62 | 31.25 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | N | Y | Y | N | Y | 40 | 2.6 | SGA | M | VD | N | 9 | 9 |
| 97 | 18 | 49 | 1.64 | 18.22 | 1 | 4 | 6 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 98 | 24 | 51 | 1.58 | 20.43 | 2 | 3 | 7 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | Y | > 24 months | Y | 5 | Medentary | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | Y | Y | 39 | 3 | AGA | M | VD | N | 9 | 9 |
| 99 | 19 | 58 | 1.57 | 23.53 | 2 | 2 | 7 | 12 | Primary | Home maker | Joint | Upper | 1 | N | | Y | 4 | Severe | Treated | N | Y | Normal | N | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | LSCS | N | 8 | 8 |
| 100 | 29 | 58 | 1.62 | 22.1 | 3 | 3 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 3 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | N | N | Y | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 101 | 22 | 57 | 1.56 | 23.42 | 0 | 2 | 7 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 102 | 19 | 45 | 1.45 | 21.4 | 0 | 2 | 8 | 10 | Primary | Home maker | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.5 | AGA | M | LSCS | N | 9 | 9 |
| 103 | 24 | 73 | 1.59 | 28.88 | 1 | 4 | 8 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 10 | Moderate | Treated | N | N | Normal | Y | N | N | N | N | N | N | N | Y | Y | Y | 34 | 2 | AGA | F | VD | N | 8 | 8 |
| 104 | 24 | 49 | 1.6 | 19.14 | 2 | 3 | 7 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | N | 3 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 105 | 21 | 58 | 1.66 | 21.05 | 0 | 3 | 5 | 8 | Secondary | Home maker | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 106 | 30 | 56 | 1.63 | 21.08 | 0 | 2 | 8 | 10 | Higher | Engineer | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Untreated | N | N | Normal | Y | N | N | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 107 | 22 | 59 | 1.58 | 23.63 | 2 | 4 | 2 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 108 | 24 | 65 | 1.56 | 26.71 | 3 | 5 | 5 | 13 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | Y | 34 | 2.6 | AGA | F | LSCS | Y | 8 | 8 |
| 109 | 19 | 73 | 1.53 | 31.18 | 2 | 2 | 3 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 8 | 8 |
| 110 | 20 | 64 | 1.64 | 23.8 | 1 | 5 | 6 | 12 | Higher | Engineer | Nuclear | Lower middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | Y | Normal | N | N | N | N | N | N | N | N | Y | N | Y | 33 | 2.3 | AGA | M | LSCS | Y | 8 | 8 |
| 111 | 32 | 51 | 1.58 | 20.43 | 1 | 4 | 9 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | N | Y | N | N | N | Y | Y | Y | N | Y | 39 | 3.3 | AGA | M | VD | N | 9 | 9 |
| 112 | 24 | 62 | 1.57 | 25.15 | 2 | 3 | 6 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 7 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 113 | 26 | 65 | 1.59 | 25.71 | 1 | 2 | 7 | 10 | Secondary | Government Job | Nuclear | Upper Middle | 1 | Y | | N | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | Y | 9 | 9 |
| 114 | 22 | 72 | 1.57 | 29.21 | 1 | 4 | 4 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 11 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 40 | 2.6 | SGA | M | VD | N | 8 | 8 |
| 115 | 28 | 48 | 1.64 | 17.85 | 2 | 4 | 5 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 116 | 24 | 51 | 1.58 | 20.43 | 1 | 5 | 6 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Medentary | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | N | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 117 | 19 | 58 | 1.57 | 23.53 | 2 | 3 | 7 | 12 | Higher | Private Job | Joint | Upper | 1 | N | | Y | 10 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 118 | 29 | 58 | 1.62 | 22.1 | 1 | 5 | 6 | 12 | Primary | Home maker | Joint | Lower middle | 1 | N | | N | 6 | Severe | Treated | N | Y | Normal | N | Y | N | N | N | N | N | N | N | N | Y | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 119 | 22 | 60 | 1.56 | 24.65 | 0 | 2 | 7 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.8 | AGA | F | LSCS | Y | 7 | 7 |
| 120 | 31 | 46 | 1.59 | 18.2 | 2 | 3 | 5 | 10 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 30 | 2.4 | AGA | F | LSCS | Y | 8 | 8 |
| 121 | 25 | 54 | 1.55 | 22.48 | 2 | 3 | 8 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 122 | 26 | 53 | 1.61 | 20.45 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 39 | 2.9 | AGA | M | LSCS | N | 8 | 8 |
| 123 | 21 | 58 | 1.67 | 20.8 | 0 | 4 | 6 | 10 | Secondary | Government Job | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 124 | 24 | 44 | 1.62 | 16.77 | 3 | 3 | 6 | 12 | Higher | Home maker | Joint | Upper | 2 | N | > 24 months | Y | 6 | Mild | Treated | N | Y | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 3.1 | AGA | M | LSCS | N | 9 | 9 |
| 125 | 23 | 55 | 1.67 | 19.72 | 1 | 4 | 7 | 12 | Primary | Home maker | Nuclear | Upper Middle | 2 | Y | | Y | 6 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.9 | AGA | F | LSCS | Y | 7 | 7 |
| 126 | 20 | 59 | 1.67 | 21.16 | 1 | 5 | 7 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 127 | 19 | 49 | 1.4 | 25 | 0 | 3 | 6 | 9 | Higher | Engineer | Joint | Lower middle | 1 | N | | Y | 6 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | Y | Y | Y | N | N | 39 | 2.5 | SGA | F | VD | N | 8 | 8 |
| 128 | 28 | 71 | 1.56 | 29.17 | 2 | 5 | 7 | 14 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 5 | Mild | Untreated | N | N | Normal | N | N | N | Y | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | F | VD | N | 8 | 8 |
| 129 | 20 | 60 | 1.6 | 23.44 | 1 | 4 | 6 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 130 | 26 | 48 | 1.66 | 17.42 | 2 | 5 | 5 | 12 | Secondary | Home maker | Nuclear | Lower middle | 1 | N | | N | 1 | Severe | Treated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 131 | 22 | 47 | 1.56 | 19.31 | 1 | 4 | 4 | 9 | Higher | Private Job | Joint | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | N | Y | Y | Y | N | Y | 32 | 2.1 | AGA | F | LSCS | Y | 7 | 8 |
| 132 | 21 | 59 | 1.63 | 22.21 | 2 | 4 | 6 | 12 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 9 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.6 | SGA | F | VD | N | 8 | 9 |
| 133 | 20 | 58 | 1.62 | 22.1 | 1.5 | 5.5 | 4 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 6 | Moderate | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | Y | 7 | 8 |
| 134 | 21 | 72 | 1.5 | 32 | 1 | 2 | 3 | 6 | Primary | Home maker | Nuclear | Lower middle | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | Y | 36 | 2.6 | AGA | M | VD | Y | 7 | 9 |
| 135 | 19 | 70 | 1.54 | 29.52 | 2 | 2 | 4 | 8 | Primary | Home maker | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 35 | 2.9 | AGA | M | VD | Y | 7 | 9 |
| 136 | 24 | 59 | 1.59 | 23.34 | 1 | 3 | 5 | 9 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 7 | Moderate | Treated | N | Y | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 3.7 | AGA | F | VD | N | 8 | 9 |
| 137 | 30 | 64 | 1.47 | 29.62 | 2 | 4 | 6 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | Y | N | 39 | 2.7 | AGA | F | VD | Y | 7 | 8 |
| 138 | 21 | 58 | 1.66 | 21.05 | 1 | 3 | 4 | 8 | Secondary | Private Job | Joint | Upper Middle | 2 | N | <24 months | Y | 9 | Severe | Treated | Y | N | Normal | Y | N | Gestational | N | N | N | N | N | Y | Y | N | Y | 39 | 2.8 | AGA | M | VD | Y | 9 | 9 |
| 139 | 27 | 69 | 1.5 | 30.67 | 2 | 6 | 4 | 10 | Higher | Teacher | Joint | Upper Lower | 2 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | Depression | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 8 | 9 |
| 140 | 22 | 52 | 1.63 | 19.57 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | Y | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 141 | 24 | 69 | 1.62 | 26.29 | 3 | 5 | 3 | 11 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 9 | Mild | Treated | N | N | Normal | Y | N | N | N | N | Physical stress | N | Y | Y | N | Y | 34 | 1.9 | AGA | F | LSCS | N | 7 | 7 |
| 142 | 19 | 65 | 1.46 | 30.49 | 1 | 2 | 4 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 10 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 9 | 9 |
| 143 | 20 | 64 | 1.47 | 29.62 | 1.5 | 3 | 5.5 | 10 | Higher | Home maker | Nuclear | Lower middle | 2 | N | <24 months | Y | 5 | Severe | Treated | N | N | Normal | Y | Y | Pre-eclampsia | N | N | N | N | N | Y | N | N | Y | 35 | 2.1 | AGA | M | VD | Y | 9 | 9 |
| 144 | 32 | 65 | 1.58 | 26.04 | 3 | 6 | 5 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 9 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.3 | AGA | M | VD | N | 9 | 9 |
| 145 | 24 | 47 | 1.57 | 19.07 | 2 | 4 | 5 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | N | 1 | Mild | Untreated | N | N | Normal | N | N | N | Y | N | N | N | N | Y | Y | N | Y | 36 | 2.9 | AGA | M | VD | Y | 7 | 8 |
| 146 | 26 | 65 | 1.59 | 25.71 | 1 | 2 | 4 | 6 | Secondary | Teacher | Nuclear | Upper Middle | 1 | Y | | N | 2 | Mild | Treated | N | Y | Normal | Y | N | N | N | N | Depression | N | Y | Y | Y | N | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 147 | 22 | 58 | 1.65 | 21.3 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 37 | 2.6 | AGA | M | VD | N | 9 | 9 |
| 148 | 18 | 49 | 1.64 | 18.22 | 1.5 | 2.5 | 3 | 7 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 149 | 24 | 51 | 1.62 | 19.43 | 1 | 1 | 4 | 6 | Primary | Daily wage labourer | Nuclear | Lower middle | 2 | N | > 24 months | N | 2 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | N | Y | N | Y | 37 | 3 | AGA | M | VD | N | 8 | 8 |
| 150 | 19 | 58 | 1.57 | 23.53 | 2 | 4 | 8 | 14 | Secondary | Private Job | Joint | Upper | 1 | N | | N | 4 | Severe | Treated | N | N | Normal | N | Y | N | Y | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 9 | 9 |
| 151 | 29 | 60 | 1.54 | 25.3 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 9 | 9 |
| 152 | 22 | 57 | 1.56 | 23.42 | 2 | 3 | 4 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | Anxiety | Y | Y | Y | N | Y | 30 | 1.8 | SGA | F | LSCS | N | 8 | 8 |
| 153 | 31 | 46 | 1.59 | 18.2 | 1 | 1 | 2 | 4 | Primary | Home maker | Nuclear | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 34 | 1.9 | AGA | F | LSCS | N | 8 | 8 |
| 154 | 25 | 54 | 1.55 | 22.48 | 2 | 4 | 3 | 9 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Severe | Untreated | N | N | Normal | N | Y | Gestational | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 155 | 26 | 53 | 1.61 | 20.45 | 2 | 5 | 7 | 14 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Untreated | N | Y | Normal | Y | Y | N | N | N | N | N | N | Y | N | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 156 | 21 | 47 | 1.46 | 22.05 | 1 | 2 | 1 | 4 | Secondary | Daily wage labourer | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 157 | 24 | 52 | 1.62 | 19.81 | 2 | 5 | 5 | 12 | Higher | Teacher | Joint | Upper | 2 | N | > 24 months | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 158 | 23 | 55 | 1.55 | 22.89 | 0 | 3 | 3 | 6 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 6 | Moderate | Treated | Y | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | N | Y | 33 | 1.9 | AGA | F | LSCS | N | 9 | 9 |
| 159 | 20 | 50 | 1.56 | 20.55 | 2 | 5 | 6 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 160 | 19 | 48 | 1.67 | 17.21 | 1 | 3 | 5 | 9 | Higher | Private Job | Joint | Lower middle | 1 | N | | Y | 8 | Severe | Treated | N | N | Normal | N | N | N | Y | N | N | N | Y | Y | Y | Y | 39 | 3.8 | AGA | F | VD | N | 9 | 9 |
| 161 | 28 | 80 | 1.69 | 28.01 | 0 | 4 | 6 | 10 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 3.5 | AGA | F | VD | N | 8 | 8 |
| 162 | 20 | 79 | 1.54 | 33.31 | 2 | 4 | 5 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | Y | 8 | 8 |
| 163 | 20 | 50 | 1.66 | 18.14 | 1 | 3 | 5 | 9 | Secondary | Private Job | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 9 |
| 164 | 19 | 51 | 1.76 | 16.46 | 0 | 4 | 6 | 10 | Primary | Home maker | Joint | Upper Lower | 1 | N | | N | 3 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | M | VD | N | 9 | 9 |
| 165 | 24 | 61 | 1.59 | 24.13 | 2 | 4 | 7 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 3.8 | AGA | F | VD | Y | 8 | 8 |
| 166 | 24 | 69 | 1.56 | 28.35 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 167 | 21 | 82 | 1.66 | 29.76 | 0 | 3 | 5 | 8 | Secondary | Engineer | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 168 | 30 | 42 | 1.58 | 16.82 | 1 | 4 | 5 | 10 | Higher | Private Job | Joint | Upper Lower | 1 | Y | | Y | 6 | Severe | Treated | N | Y | Normal | N | Y | Gestational | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 169 | 22 | 52 | 1.6 | 20.31 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | Y | 8 | 8 |
| 170 | 24 | 68 | 1.66 | 24.68 | 1 | 2 | 5 | 8 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 32 | 2.3 | AGA | F | LSCS | Y | 8 | 8 |
| 171 | 19 | 65 | 1.59 | 25.71 | 0 | 3 | 4 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | Y | 8 | 9 |
| 172 | 20 | 64 | 1.54 | 26.99 | 2 | 3 | 3 | 8 | Higher | Home maker | Nuclear | Lower middle | 2 | N | <24 months | Y | 8 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | N | N | Y | 32 | 2.7 | AGA | M | LSCS | Y | 8 | 8 |
| 173 | 32 | 71 | 1.58 | 28.44 | 3 | 4 | 6 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | N | N | Y | Y | N | Y | 36 | 3.3 | AGA | M | VD | Y | 9 | 9 |
| 174 | 24 | 62 | 1.57 | 25.15 | 2 | 3 | 6 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | N | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 175 | 26 | 65 | 1.59 | 25.71 | 1 | 5 | 4 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | Y | | N | 6 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 176 | 22 | 64 | 1.56 | 26.3 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 3.4 | AGA | M | VD | N | 8 | 8 |
| 177 | 20 | 44 | 1.64 | 16.36 | 1 | 3 | 7 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 178 | 24 | 74 | 1.58 | 29.64 | 2 | 5 | 5 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Medentary | Treated | N | Y | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 179 | 19 | 58 | 1.57 | 23.53 | 1 | 5 | 6 | 12 | Primary | Home maker | Joint | Upper | 1 | N | | Y | 4 | Severe | Treated | Y | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 180 | 29 | 72 | 1.62 | 27.43 | 1 | 4 | 7 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |

# Master chart

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 181 | 22 | 57 | 1.56 | 23.42 | 0 | 3 | 5 | 8 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 30 | 1.4 | SGA | F | LSCS | Y | 9 | 9 |
| 182 | 21 | 53 | 1.45 | 25.21 | 2 | 5 | 5 | 12 | Primary | Daily wage labourer | Nuclear | Upper Lower | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.6 | SGA | F | VD | N | 8 | 8 |
| 183 | 20 | 58 | 1.62 | 22.1 | 1 | 5 | 5 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 184 | 23 | 48 | 1.66 | 17.42 | 2 | 3 | 4 | 9 | Secondary | Home maker | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 185 | 19 | 51 | 1.62 | 19.43 | 1 | 5 | 4 | 10 | Primary | Daily wage labourer | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.5 | AGA | M | VD | N | 9 | 9 |
| 186 | 24 | 61 | 1.59 | 24.13 | 2 | 6 | 5 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.7 | AGA | F | VD | N | 8 | 8 |
| 187 | 24 | 50 | 1.62 | 19.05 | 1 | 4 | 7 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | Y | Normal | Y | Y | N | N | N | N | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | Y | 8 | 8 |
| 188 | 21 | 58 | 1.66 | 21.05 | 0 | 4 | 4 | 8 | Primary | Daily wage labourer | Joint | Lower middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 35 | 2.1 | AGA | M | VD | Y | 8 | 8 |
| 189 | 30 | 67 | 1.56 | 27.53 | 1 | 4 | 5 | 10 | Higher | Daily wage labourer | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 8 | 8 |
| 190 | 22 | 52 | 1.64 | 19.33 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 9 | 9 |
| 191 | 24 | 57 | 1.62 | 21.72 | 2 | 6 | 5 | 13 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 34 | 2.8 | AGA | F | LSCS | Y | 9 | 9 |
| 192 | 19 | 65 | 1.67 | 23.31 | 1 | 3 | 3 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | N | 38 | 2.9 | AGA | F | VD | N | 9 | 9 |
| 193 | 20 | 55 | 1.5 | 24.44 | 2 | 2 | 5 | 9 | Higher | Daily wage labourer | Nuclear | Lower middle | 2 | N | <24 months | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | N | N | N | 34 | 2.7 | AGA | M | LSCS | Y | 8 | 8 |
| 194 | 32 | 51 | 1.58 | 20.43 | 1 | 5 | 7 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | Gestational | N | N | N | Y | Y | Y | Y | Y | 39 | 3 | AGA | M | VD | N | 9 | 9 |
| 195 | 24 | 62 | 1.57 | 25.15 | 2 | 5 | 4 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 4 | Mild | Untreated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | N | N | 39 | 3.7 | AGA | M | VD | N | 8 | 8 |
| 196 | 26 | 65 | 1.59 | 25.71 | 1 | 4 | 5 | 10 | Secondary | Daily wage labourer | Nuclear | Upper Middle | 1 | Y | | N | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 197 | 22 | 69 | 1.54 | 29.09 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | Y | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 198 | 21 | 49 | 1.64 | 18.22 | 2 | 4 | 5 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 199 | 24 | 51 | 1.58 | 20.43 | 1 | 5 | 6 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | N | Y | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 200 | 19 | 47 | 1.57 | 19.07 | 0 | 6 | 6 | 12 | Primary | Government Job | Joint | Upper | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 201 | 29 | 58 | 1.62 | 22.1 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 9 | 9 |
| 202 | 22 | 50 | 1.56 | 20.55 | 2 | 2 | 5 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.5 | AGA | F | LSCS | N | 9 | 9 |
| 203 | 34 | 57 | 1.48 | 26.02 | 4 | 5 | 5 | 14 | Higher | Home maker | Nuclear | Upper Middle | 2 | N | | Y | 8 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.6 | AGA | F | LSCS | N | 8 | 8 |
| 204 | 25 | 54 | 1.55 | 22.48 | 1 | 3 | 5 | 9 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 205 | 26 | 50 | 1.5 | 22.22 | 1 | 4 | 4 | 9 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | Y | N | N | Y | 39 | 2.6 | SGA | M | VD | N | 8 | 8 |
| 206 | 21 | 64 | 1.58 | 25.64 | 2 | 3 | 5 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | Y | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 8 |
| 207 | 24 | 56 | 1.62 | 21.34 | 1 | 4 | 4 | 9 | Higher | Home maker | Joint | Upper | 2 | N | > 24 months | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 39 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 208 | 23 | 69 | 1.54 | 29.09 | 1 | 5 | 6 | 12 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 6 | Moderate | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 34 | 2.4 | AGA | F | LSCS | N | 9 | 9 |
| 209 | 20 | 45 | 1.45 | 21.4 | 2 | 5 | 6 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 210 | 19 | 52 | 1.67 | 18.65 | 1 | 4 | 4 | 9 | Higher | Engineer | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | Y | N | N | Y | N | N | N | Y | Y | N | Y | 39 | 3.8 | AGA | F | VD | N | 8 | 8 |
| 211 | 28 | 51 | 1.69 | 17.86 | 2 | 4 | 4 | 10 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | N | Y | 40 | 3.5 | AGA | F | VD | N | 9 | 9 |
| 212 | 20 | 48 | 1.56 | 19.72 | 1 | 3 | 7 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 213 | 18 | 50 | 1.66 | 18.14 | 2 | 3 | 4 | 9 | Secondary | Daily wage labourer | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 8 |
| 214 | 19 | 51 | 1.65 | 18.73 | 1 | 4 | 5 | 10 | Primary | Daily wage labourer | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | M | VD | N | 8 | 8 |
| 215 | 24 | 71 | 1.59 | 28.08 | 0 | 6 | 7 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 3.6 | AGA | F | VD | N | 9 | 9 |
| 216 | 24 | 64 | 1.62 | 24.39 | 1 | 3 | 8 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 217 | 21 | 58 | 1.66 | 21.05 | 0 | 2 | 6 | 8 | Secondary | Home maker | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 218 | 30 | 47 | 1.43 | 22.98 | 1 | 4 | 5 | 10 | Higher | Government Job | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 219 | 22 | 52 | 1.47 | 24.06 | 1 | 2 | 6 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | Y | Normal | Y | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 9 | 9 |
| 220 | 24 | 57 | 1.6 | 22.27 | 0 | 5 | 6 | 11 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 33 | 2.2 | AGA | F | LSCS | N | 8 | 8 |
| 221 | 19 | 55 | 1.54 | 23.19 | 0 | 2 | 5 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 8 | 8 |
| 222 | 20 | 64 | 1.52 | 27.7 | 2 | 3 | 5 | 10 | Higher | Engineer | Nuclear | Lower middle | 2 | N | <24 months | Y | 10 | Moderate | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | N | Y | Y | 34 | 2.6 | AGA | M | LSCS | N | 8 | 8 |
| 223 | 32 | 66 | 1.58 | 26.44 | 2 | 4 | 8 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 5 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | N | Y | 37 | 3.3 | AGA | M | VD | N | 8 | 8 |
| 224 | 24 | 62 | 1.57 | 25.15 | 1 | 3 | 7 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 4 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 225 | 26 | 70 | 1.5 | 31.11 | 0 | 4 | 6 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | Y | | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 36 | 2.7 | AGA | M | VD | N | 9 | 9 |
| 226 | 22 | 82 | 1.62 | 31.25 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | N | Y | Y | N | Y | 40 | 2.6 | SGA | M | VD | N | 9 | 9 |
| 227 | 18 | 49 | 1.64 | 18.22 | 1 | 4 | 6 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 228 | 24 | 51 | 1.58 | 20.43 | 2 | 3 | 7 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | Y | > 24 months | Y | 5 | Medentary | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | Y | Y | 39 | 3 | AGA | M | VD | N | 9 | 9 |
| 229 | 19 | 58 | 1.57 | 23.53 | 2 | 2 | 7 | 12 | Primary | Home maker | Joint | Upper | 1 | N | | Y | 4 | Severe | Treated | N | Y | Normal | N | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | LSCS | N | 8 | 8 |
| 230 | 29 | 58 | 1.62 | 22.1 | 3 | 3 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 3 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | N | N | Y | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 231 | 22 | 57 | 1.56 | 23.42 | 0 | 2 | 7 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 232 | 19 | 45 | 1.45 | 21.4 | 0 | 2 | 8 | 10 | Primary | Home maker | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.5 | AGA | M | LSCS | N | 9 | 9 |
| 233 | 24 | 73 | 1.59 | 28.88 | 1 | 4 | 8 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 10 | Moderate | Treated | N | N | Normal | Y | N | N | N | N | N | N | N | Y | Y | Y | Y | 34 | 2 | AGA | F | VD | N | 8 | 8 |
| 234 | 24 | 49 | 1.6 | 19.14 | 2 | 3 | 7 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | N | 3 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 235 | 21 | 58 | 1.66 | 21.05 | 0 | 3 | 5 | 8 | Secondary | Home maker | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 236 | 30 | 56 | 1.63 | 21.08 | 0 | 2 | 8 | 10 | Higher | Engineer | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Untreated | N | N | Normal | Y | N | N | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 237 | 22 | 59 | 1.58 | 23.63 | 2 | 4 | 2 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 238 | 24 | 65 | 1.56 | 26.71 | 3 | 5 | 5 | 13 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | Y | Y | 34 | 2.6 | AGA | F | LSCS | Y | 8 | 8 |
| 239 | 19 | 73 | 1.53 | 31.18 | 2 | 2 | 3 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 8 | 8 |
| 240 | 20 | 64 | 1.64 | 23.8 | 1 | 5 | 6 | 12 | Higher | Engineer | Nuclear | Lower middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | Y | Normal | N | N | N | N | N | N | N | N | Y | N | Y | Y | 33 | 2.3 | AGA | M | LSCS | Y | 8 | 8 |
| 241 | 32 | 51 | 1.58 | 20.43 | 1 | 4 | 9 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | N | Y | N | N | N | Y | Y | Y | N | Y | 39 | 3.3 | AGA | M | VD | N | 9 | 9 |
| 242 | 24 | 62 | 1.57 | 25.15 | 2 | 3 | 6 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 7 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | N | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 243 | 26 | 65 | 1.59 | 25.71 | 1 | 2 | 7 | 10 | Secondary | Government Job | Nuclear | Upper Middle | 1 | Y | | N | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | Y | 9 | 9 |
| 244 | 22 | 72 | 1.57 | 29.21 | 1 | 4 | 4 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 11 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | Y | Y | 40 | 2.6 | SGA | M | VD | N | 8 | 8 |
| 245 | 28 | 48 | 1.64 | 17.85 | 2 | 4 | 5 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 246 | 24 | 51 | 1.58 | 20.43 | 1 | 5 | 6 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Medentary | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | N | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 247 | 19 | 58 | 1.57 | 23.53 | 2 | 3 | 7 | 12 | Higher | Private Job | Joint | Upper | 1 | N | | Y | 10 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 248 | 29 | 58 | 1.62 | 22.1 | 1 | 5 | 6 | 12 | Primary | Home maker | Joint | Lower middle | 1 | N | | N | 6 | Severe | Treated | N | Y | Normal | N | Y | N | N | N | N | N | N | N | N | Y | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 249 | 22 | 60 | 1.56 | 24.65 | 0 | 2 | 7 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.8 | AGA | F | LSCS | Y | 7 | 7 |
| 250 | 31 | 46 | 1.59 | 18.2 | 2 | 3 | 5 | 10 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | Y | 30 | 2.4 | AGA | F | LSCS | Y | 8 | 8 |
| 251 | 25 | 54 | 1.55 | 22.48 | 2 | 3 | 8 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 252 | 26 | 53 | 1.61 | 20.45 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | Y | 39 | 2.9 | AGA | M | LSCS | N | 8 | 8 |
| 253 | 21 | 58 | 1.67 | 20.8 | 0 | 4 | 6 | 10 | Secondary | Government Job | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 254 | 24 | 44 | 1.62 | 16.77 | 3 | 3 | 6 | 12 | Higher | Home maker | Joint | Upper | 2 | N | > 24 months | Y | 6 | Mild | Treated | N | Y | Normal | N | Y | N | N | N | N | N | N | Y | N | Y | 39 | 3.1 | AGA | M | LSCS | N | 9 | 9 |
| 255 | 23 | 55 | 1.67 | 19.72 | 1 | 4 | 7 | 12 | Primary | Home maker | Nuclear | Upper Middle | 2 | Y | | Y | 6 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.9 | AGA | F | LSCS | Y | 7 | 7 |
| 256 | 20 | 59 | 1.67 | 21.16 | 1 | 5 | 7 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 257 | 19 | 49 | 1.4 | 25 | 0 | 3 | 6 | 9 | Higher | Engineer | Joint | Lower middle | 1 | N | | Y | 6 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | Y | Y | Y | N | N | 39 | 2.5 | SGA | F | VD | N | 8 | 8 |
| 258 | 28 | 71 | 1.56 | 29.17 | 2 | 5 | 7 | 14 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 5 | Mild | Untreated | N | N | Normal | N | N | N | Y | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | F | VD | N | 8 | 8 |
| 259 | 20 | 60 | 1.6 | 23.44 | 1 | 4 | 6 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 260 | 26 | 48 | 1.66 | 17.42 | 2 | 5 | 5 | 12 | Secondary | Home maker | Nuclear | Lower middle | 1 | N | | N | 1 | Severe | Treated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |

# Master chart

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 261 | 22 | 47 | 1.56 | 19.31 | 1 | 4 | 4 | 9 | Higher | Private Job | Joint | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | Y | Y | Y | N | Y | 32 | 2.1 | AGA | F | LSCS | Y | 7 | 8 |
| 262 | 21 | 59 | 1.63 | 22.21 | 2 | 4 | 6 | 12 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 9 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.6 | SGA | F | VD | N | 8 | 9 |
| 263 | 20 | 58 | 1.62 | 22.1 | 1.5 | 5.5 | 4 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 6 | Moderate | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | Y | 7 | 8 |
| 264 | 21 | 72 | 1.5 | 32 | 1 | 2 | 3 | 6 | Primary | Home maker | Nuclear | Lower middle | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 36 | 2.6 | AGA | M | VD | Y | 7 | 9 |
| 265 | 19 | 70 | 1.54 | 29.52 | 2 | 2 | 4 | 8 | Primary | Home maker | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 35 | 2.9 | AGA | M | VD | Y | 7 | 9 |
| 266 | 24 | 59 | 1.59 | 23.34 | 1 | 3 | 5 | 9 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 7 | Moderate | Treated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.7 | AGA | F | VD | N | 8 | 9 |
| 267 | 30 | 64 | 1.47 | 29.62 | 2 | 4 | 6 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | N | 39 | 2.7 | AGA | F | VD | Y | 7 | 8 |
| 268 | 21 | 58 | 1.66 | 21.05 | 1 | 3 | 4 | 8 | Secondary | Private Job | Joint | Upper Middle | 2 | N | <24 months | Y | 9 | Severe | Treated | Y | N | Normal | Y | N | Gestational | N | N | N | N | Y | Y | N | Y | 39 | 2.8 | AGA | M | VD | Y | 9 | 9 |
| 269 | 27 | 69 | 1.5 | 30.67 | 2 | 6 | 4 | 10 | Higher | Teacher | Joint | Upper Lower | 2 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | Depression | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 8 | 9 |
| 270 | 22 | 52 | 1.63 | 19.57 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | Y | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 8 | 8 |
| 271 | 24 | 69 | 1.62 | 26.29 | 3 | 5 | 3 | 11 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 9 | Mild | Treated | N | N | Normal | Y | N | N | N | N | Physical stress | N | Y | Y | N | Y | 34 | 1.9 | AGA | F | LSCS | N | 7 | 7 |
| 272 | 19 | 65 | 1.46 | 30.49 | 1 | 2 | 4 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 10 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 9 | 9 |
| 273 | 20 | 64 | 1.47 | 29.62 | 1.5 | 3 | 5.5 | 10 | Higher | Home maker | Nuclear | Lower middle | 2 | N | <24 months | Y | 5 | Severe | Treated | N | N | Normal | Y | Y | Pre-eclampsia | N | N | N | N | Y | N | N | Y | 35 | 2.1 | AGA | M | VD | Y | 9 | 9 |
| 274 | 32 | 65 | 1.58 | 26.04 | 3 | 6 | 5 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 9 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.3 | AGA | M | VD | N | 9 | 9 |
| 275 | 24 | 47 | 1.57 | 19.07 | 2 | 4 | 5 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | N | 1 | Mild | Untreated | N | N | Normal | N | N | N | Y | N | N | N | Y | Y | N | Y | 36 | 2.9 | AGA | M | VD | Y | 7 | 8 |
| 276 | 26 | 65 | 1.59 | 25.71 | 1 | 2 | 4 | 6 | Secondary | Teacher | Nuclear | Upper Middle | 1 | Y | | N | 2 | Mild | Treated | N | Y | Normal | Y | N | N | N | N | Depression | N | Y | Y | Y | N | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 277 | 22 | 58 | 1.65 | 21.3 | 1 | 3 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 37 | 2.6 | AGA | M | VD | N | 9 | 9 |
| 278 | 18 | 49 | 1.64 | 18.22 | 1.5 | 2.5 | 3 | 7 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 279 | 24 | 51 | 1.62 | 19.43 | 1 | 1 | 4 | 6 | Primary | Daily wage labourer | Nuclear | Lower middle | 2 | N | > 24 months | N | 2 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | Y | N | N | Y | 37 | 3 | AGA | M | VD | N | 8 | 8 |
| 280 | 19 | 58 | 1.57 | 23.53 | 2 | 4 | 8 | 14 | Secondary | Private Job | Joint | Upper | 1 | N | | N | 4 | Severe | Treated | N | N | Normal | N | Y | N | Y | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 9 | 9 |
| 281 | 29 | 60 | 1.54 | 25.3 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 2 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 9 | 9 |
| 282 | 22 | 57 | 1.56 | 23.42 | 2 | 3 | 4 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | Anxiety | Y | Y | Y | N | Y | 30 | 1.8 | SGA | F | LSCS | N | 8 | 8 |
| 283 | 31 | 46 | 1.59 | 18.2 | 1 | 1 | 2 | 4 | Primary | Home maker | Nuclear | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 34 | 1.9 | AGA | F | LSCS | N | 8 | 8 |
| 284 | 25 | 54 | 1.55 | 22.48 | 2 | 4 | 3 | 9 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Severe | Untreated | N | N | Normal | N | Y | Gestational | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 285 | 26 | 53 | 1.61 | 20.45 | 2 | 5 | 7 | 14 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Untreated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | N | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 286 | 21 | 47 | 1.46 | 22.05 | 1 | 2 | 1 | 4 | Secondary | Daily wage labourer | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | Y | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 287 | 24 | 52 | 1.62 | 19.81 | 2 | 5 | 5 | 12 | Higher | Teacher | Joint | Upper | 2 | N | > 24 months | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 288 | 23 | 55 | 1.55 | 22.89 | 0 | 3 | 3 | 6 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 6 | Moderate | Treated | Y | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 33 | 1.9 | AGA | F | LSCS | N | 9 | 9 |
| 289 | 20 | 50 | 1.56 | 20.55 | 2 | 5 | 6 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 290 | 19 | 48 | 1.67 | 17.21 | 1 | 3 | 5 | 9 | Higher | Private Job | Joint | Lower middle | 1 | N | | Y | 8 | Severe | Treated | N | N | Normal | N | N | N | Y | N | N | Y | Y | Y | Y | Y | 39 | 3.8 | AGA | F | VD | N | 9 | 9 |
| 291 | 28 | 80 | 1.69 | 28.01 | 0 | 4 | 6 | 10 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 3.5 | AGA | F | VD | N | 8 | 8 |
| 292 | 20 | 79 | 1.54 | 33.31 | 2 | 4 | 5 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | Y | 8 | 8 |
| 293 | 20 | 50 | 1.66 | 18.14 | 1 | 3 | 5 | 9 | Secondary | Private Job | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 9 |
| 294 | 19 | 51 | 1.76 | 16.46 | 0 | 4 | 6 | 10 | Primary | Home maker | Joint | Upper Lower | 1 | N | | N | 3 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | M | VD | N | 9 | 9 |
| 295 | 24 | 61 | 1.59 | 24.13 | 2 | 4 | 7 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.8 | AGA | F | VD | Y | 8 | 8 |
| 296 | 24 | 69 | 1.56 | 28.35 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 297 | 21 | 82 | 1.66 | 29.76 | 0 | 3 | 5 | 8 | Secondary | Engineer | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 298 | 30 | 42 | 1.58 | 16.82 | 1 | 4 | 5 | 10 | Higher | Private Job | Joint | Upper Lower | 1 | Y | | Y | 6 | Severe | Treated | N | Y | Normal | N | Y | Gestational | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 299 | 22 | 52 | 1.6 | 20.31 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | Y | 8 | 8 |
| 300 | 24 | 68 | 1.66 | 24.68 | 1 | 2 | 5 | 8 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 32 | 2.3 | AGA | F | LSCS | Y | 8 | 8 |
| 301 | 19 | 65 | 1.59 | 25.71 | 0 | 3 | 4 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | Y | 8 | 9 |
| 302 | 20 | 64 | 1.54 | 26.99 | 2 | 3 | 3 | 8 | Higher | Home maker | Nuclear | Lower middle | 2 | N | <24 months | Y | 8 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | N | Y | 32 | 2.7 | AGA | M | LSCS | Y | 8 | 8 |
| 303 | 32 | 71 | 1.58 | 28.44 | 3 | 4 | 6 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | Y | Pre-eclampsia | N | N | N | N | Y | Y | N | Y | 36 | 3.3 | AGA | M | VD | Y | 9 | 9 |
| 304 | 24 | 62 | 1.57 | 25.15 | 2 | 3 | 6 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | N | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |
| 305 | 26 | 65 | 1.59 | 25.71 | 1 | 5 | 4 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | Y | | N | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | N | 9 | 9 |
| 306 | 22 | 64 | 1.56 | 26.3 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 3.4 | AGA | M | VD | N | 8 | 8 |
| 307 | 20 | 44 | 1.64 | 16.36 | 1 | 3 | 7 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 308 | 24 | 74 | 1.58 | 29.64 | 2 | 5 | 5 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Medentary | Treated | N | Y | Normal | N | Y | N | N | N | N | N | Y | N | N | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 309 | 19 | 58 | 1.57 | 23.53 | 1 | 5 | 6 | 12 | Primary | Home maker | Joint | Upper | 1 | N | | Y | 4 | Severe | Treated | Y | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 310 | 29 | 72 | 1.62 | 27.43 | 1 | 4 | 7 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 2 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 311 | 22 | 57 | 1.56 | 23.42 | 0 | 3 | 5 | 8 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 30 | 1.4 | SGA | F | LSCS | Y | 9 | 9 |
| 312 | 21 | 53 | 1.45 | 25.21 | 2 | 5 | 5 | 12 | Primary | Daily wage labourer | Nuclear | Upper Lower | 1 | N | | Y | 5 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 2.6 | SGA | F | VD | N | 8 | 8 |
| 313 | 20 | 58 | 1.62 | 22.1 | 1 | 5 | 5 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 314 | 23 | 48 | 1.66 | 17.42 | 2 | 3 | 4 | 9 | Secondary | Home maker | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 9 | 9 |
| 315 | 19 | 51 | 1.62 | 19.43 | 1 | 5 | 4 | 10 | Primary | Daily wage labourer | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.5 | AGA | M | VD | N | 9 | 9 |
| 316 | 24 | 61 | 1.59 | 24.13 | 2 | 6 | 5 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.7 | AGA | F | VD | N | 8 | 8 |
| 317 | 24 | 50 | 1.62 | 19.05 | 1 | 4 | 7 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | Y | Normal | Y | Y | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | Y | 8 | 8 |
| 318 | 21 | 58 | 1.66 | 21.05 | 0 | 4 | 4 | 8 | Primary | Daily wage labourer | Joint | Lower middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 35 | 2.1 | AGA | M | VD | Y | 8 | 8 |
| 319 | 30 | 67 | 1.56 | 27.53 | 1 | 4 | 5 | 10 | Higher | Daily wage labourer | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | N | 38 | 3.1 | AGA | M | VD | N | 8 | 8 |
| 320 | 22 | 52 | 1.64 | 19.33 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 9 | 9 |
| 321 | 24 | 57 | 1.62 | 21.72 | 2 | 6 | 5 | 13 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 34 | 2.8 | AGA | F | LSCS | Y | 9 | 9 |
| 322 | 19 | 65 | 1.67 | 23.31 | 1 | 3 | 3 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | N | 38 | 2.9 | AGA | F | VD | N | 9 | 9 |
| 323 | 20 | 55 | 1.5 | 24.44 | 2 | 2 | 5 | 9 | Higher | Daily wage labourer | Nuclear | Lower middle | 2 | N | <24 months | N | 2 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | N | N | N | 34 | 2.7 | AGA | M | LSCS | Y | 8 | 8 |
| 324 | 32 | 51 | 1.58 | 20.43 | 1 | 5 | 7 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 9 | Severe | Treated | N | N | Normal | Y | Y | Gestational | N | N | N | N | Y | Y | Y | Y | 39 | 3 | AGA | M | VD | N | 9 | 9 |
| 325 | 24 | 62 | 1.57 | 25.15 | 2 | 5 | 4 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 4 | Mild | Untreated | N | Y | Normal | Y | Y | N | N | N | N | N | Y | Y | N | N | 39 | 3.7 | AGA | M | VD | N | 8 | 8 |
| 326 | 26 | 65 | 1.59 | 25.71 | 1 | 4 | 5 | 10 | Secondary | Daily wage labourer | Nuclear | Upper Middle | 1 | Y | | N | 3 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 327 | 22 | 69 | 1.54 | 29.09 | 0 | 4 | 5 | 9 | Primary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | Y | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 328 | 21 | 49 | 1.64 | 18.22 | 2 | 4 | 5 | 11 | Primary | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 329 | 24 | 51 | 1.58 | 20.43 | 1 | 5 | 6 | 12 | Secondary | Private Job | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 5 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | N | Y | Y | 39 | 3 | AGA | M | VD | N | 8 | 8 |
| 330 | 19 | 47 | 1.57 | 19.07 | 0 | 6 | 6 | 12 | Primary | Government Job | Joint | Upper | 1 | N | | Y | 9 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 39 | 3.2 | AGA | F | VD | N | 8 | 8 |
| 331 | 29 | 58 | 1.62 | 22.1 | 1 | 5 | 6 | 12 | Secondary | Home maker | Joint | Upper | 1 | N | | N | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | N | N | N | N | 38 | 2.7 | AGA | F | VD | N | 9 | 9 |
| 332 | 22 | 50 | 1.56 | 20.55 | 2 | 2 | 5 | 9 | Higher | Home maker | Joint | Upper Middle | 1 | N | | Y | 7 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.5 | AGA | F | LSCS | N | 9 | 9 |
| 333 | 34 | 57 | 1.48 | 26.02 | 4 | 5 | 5 | 14 | Higher | Home maker | Nuclear | Upper Middle | 2 | N | | Y | 8 | Mild | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 34 | 2.6 | AGA | F | LSCS | N | 8 | 8 |
| 334 | 25 | 54 | 1.55 | 22.48 | 1 | 3 | 5 | 9 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 6 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 335 | 26 | 50 | 1.5 | 22.22 | 1 | 4 | 4 | 9 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | <24 months | Y | 4 | Severe | Treated | N | N | Normal | N | N | Gestational | N | N | N | N | Y | N | N | Y | 39 | 2.6 | SGA | M | VD | N | 8 | 8 |
| 336 | 21 | 64 | 1.58 | 25.64 | 2 | 3 | 5 | 10 | Secondary | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Treated | N | Y | Normal | N | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 8 |
| 337 | 24 | 56 | 1.62 | 21.34 | 1 | 4 | 4 | 9 | Higher | Home maker | Joint | Upper | 2 | N | > 24 months | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 338 | 23 | 69 | 1.54 | 29.09 | 1 | 5 | 6 | 12 | Primary | Home maker | Nuclear | Upper Middle | 2 | N | > 24 months | Y | 6 | Moderate | Treated | N | N | Normal | N | Y | N | N | N | N | Y | Y | Y | Y | Y | 34 | 2.4 | AGA | F | LSCS | N | 9 | 9 |
| 339 | 20 | 45 | 1.45 | 21.4 | 2 | 5 | 6 | 13 | Higher | Home maker | Nuclear | Upper Middle | 1 | N | | Y | 4 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 2.9 | AGA | M | VD | N | 9 | 9 |
| 340 | 19 | 52 | 1.67 | 18.65 | 1 | 4 | 4 | 9 | Higher | Engineer | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | Y | N | N | Y | N | N | Y | Y | Y | N | Y | 39 | 3.8 | AGA | F | VD | N | 8 | 8 |
| 341 | 28 | 51 | 1.69 | 17.86 | 2 | 4 | 4 | 10 | Higher | Home maker | Nuclear | Upper Lower | 1 | Y | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.5 | AGA | F | VD | N | 9 | 9 |
| 342 | 20 | 48 | 1.56 | 19.72 | 1 | 3 | 7 | 11 | Primary | Home maker | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | Y | Y | 38 | 2.8 | AGA | M | VD | N | 8 | 8 |
| 343 | 18 | 50 | 1.66 | 18.14 | 2 | 3 | 4 | 9 | Secondary | Daily wage labourer | Nuclear | Lower middle | 1 | N | | Y | 5 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 38 | 3.2 | AGA | M | VD | N | 8 | 8 |
| 344 | 19 | 51 | 1.65 | 18.73 | 1 | 4 | 5 | 10 | Primary | Daily wage labourer | Joint | Upper Lower | 1 | N | | Y | 6 | Mild | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 39 | 3.5 | AGA | M | VD | N | 8 | 8 |
| 345 | 24 | 71 | 1.59 | 28.08 | 0 | 6 | 7 | 13 | Secondary | Home maker | Nuclear | Upper Lower | 2 | N | > 24 months | Y | 4 | Moderate | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | N | Y | 40 | 3.6 | AGA | F | VD | N | 9 | 9 |
| 346 | 24 | 64 | 1.62 | 24.39 | 1 | 3 | 8 | 12 | Secondary | Home maker | Joint | Lower middle | 2 | N | > 24 months | Y | 5 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | Y | Y | Y | Y | Y | 39 | 2.7 | AGA | F | VD | N | 8 | 8 |
| 347 | 21 | 58 | 1.66 | 21.05 | 0 | 2 | 6 | 8 | Secondary | Home maker | Joint | Upper Middle | 2 | N | <24 months | Y | 4 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | Y | N | Y | 39 | 2.9 | AGA | M | VD | N | 8 | 8 |
| 348 | 30 | 47 | 1.43 | 22.98 | 1 | 4 | 5 | 10 | Higher | Government Job | Joint | Upper Lower | 1 | Y | | Y | 6 | Mild | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | N | N | 38 | 3.1 | AGA | M | VD | N | 9 | 9 |
| 349 | 22 | 52 | 1.47 | 24.06 | 1 | 2 | 6 | 9 | Primary | Home maker | Nuclear | Upper Lower | 2 | N | <24 months | N | 2 | Mild | Untreated | N | Y | Normal | Y | N | N | N | N | N | N | Y | Y | N | Y | 40 | 2.8 | AGA | F | VD | N | 9 | 9 |
| 350 | 24 | 57 | 1.6 | 22.27 | 0 | 5 | 6 | 11 | Secondary | Private Job | Nuclear | Upper Lower | 1 | N | | Y | 4 | Mild | Treated | N | N | Normal | Y | Y | N | N | N | N | N | Y | Y | Y | Y | 33 | 2.2 | AGA | F | LSCS | N | 8 | 8 |
| 351 | 19 | 55 | 1.54 | 23.19 | 0 | 2 | 5 | 7 | Higher | Home maker | Joint | Lower middle | 1 | N | | Y | 4 | Severe | Treated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | N | Y | 38 | 2.9 | AGA | F | VD | N | 8 | 8 |
| 352 | 20 | 64 | 1.52 | 27.7 | 2 | 3 | 5 | 10 | Higher | Engineer | Nuclear | Lower middle | 2 | N | <24 months | Y | 10 | Moderate | Treated | N | N | Normal | N | N | N | N | N | N | N | Y | N | Y | Y | 34 | 2.6 | AGA | M | LSCS | N | 8 | 8 |
| 353 | 32 | 66 | 1.58 | 26.44 | 2 | 4 | 8 | 14 | Higher | Home maker | Nuclear | Upper | 2 | Y | > 24 months | Y | 5 | Severe | Treated | N | N | Normal | Y | N | N | N | N | N | Y | Y | Y | N | Y | 37 | 3.3 | AGA | M | VD | N | 8 | 8 |
| 354 | 24 | 62 | 1.57 | 25.15 | 1 | 3 | 7 | 11 | Secondary | Home maker | Nuclear | Lower middle | 2 | N | > 24 months | Y | 4 | Mild | Untreated | N | N | Normal | N | Y | N | N | N | N | N | Y | Y | Y | Y | 39 | 3.7 | AGA | M | VD | N | 9 | 9 |